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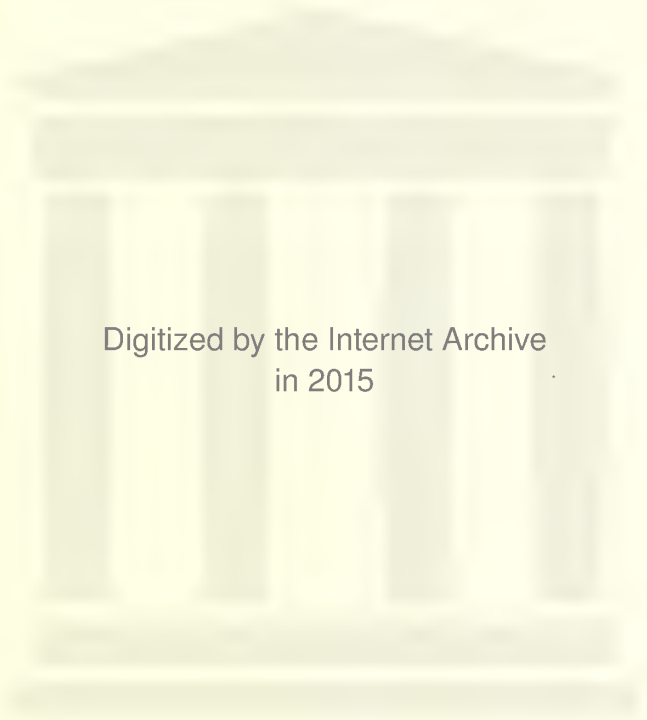
OR

STEPS TOWARD A TRUE LIFE.

GEO. H. EVERETT. SUSAN EVERETT.



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HEALTH FRAGMENTS

OR,

STEPS TOWARD A TRUE LIFE.

EMBRACING

HEALTH, DIGESTION, DISEASE, AND THE SCIENCE OF THE REPRODUCTIVE ORGANS.

With One Hundred and Twenty-five Illustrations

By KAPPES, SPIEGLE AND TREAT.

192760

PART FIRST.

CLINTON HALL
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BY

GEORGE H. EVERETT, M.D.,

LECTURER ON PHYSIOLOGY AND SURGERY.



SECOND EDITION.

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PREFACE.

This volume is a nugget from sultry, summer weeks following a year of unusual labor. To my friends this may explain any want of finish found in the following pages. To tell the old, old story of life, and have it appear new or fascinating, is no idle task; yet, I trust, the reader will not sleep over these pages. They contain the latest and freshest facts of science applied to every-day living, such facts as must render youth more productive, middle age more serviceable, and old age more graceful than life can be without them. The chaste and cheerful illustrations herein employed have not been, hitherto, used in connection with health literature; while Part II. from Mrs. Everett's pen will find a welcome in the hands of every artistic housekeeper.

G. H. E.

New York City, *August* 11, 1874.



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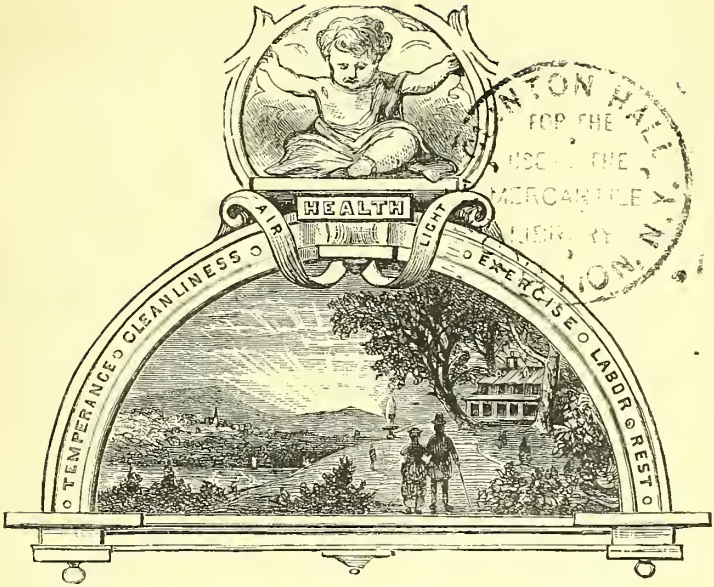
Its Authors are widely-known Lecturers and Health Teachers, and are competent to speak with authority upon matters referred to in this volume.

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CHAPTER I.

INTRODUCTORY.

§ 1. Is Health a Dream or a "Lost Art?"

Health crowns all else. The flush of youth, the well-tempered ways of middle life, the strong arm which wins great battles, the sublime courage for the hero of each day, the Christian's walk and ways, the peaceful waiting of the latter days, the great eternity we meet beyond; all these, and more, depend upon a well-conditioned life, expressed by the familiar term *good health.*

It is more than absence of pain. It means more than to sleep soundly and work willingly. It means

the best possible expression of life force. It means culture, a clear skin, a bright eye, a tinted cheek, and limbs that "ache with strength." With it, the eagle dwells in the clouds; without it, he is dull and stupid as a barn-yard fowl. With it come Swiss carols, and other wild warbles from a full heart; without it, even youth becomes dull and pale, old and haggard; and the hateful language of suffering supplants that of song. Health means energy, ambition, enthusiasm, a divine activity which consecrates all the quickened purposes of a royal soul.

Its opposite is torpor, idleness, stupidity, gangrene, jealousy, suspicion, misanthropy, crime. Youth is clothed with everything beautiful and attainable; while we identify old age with lifeless leaves and withered branches. It does, but should not, mean disease.

We reluctantly part with youth, and unwillingly watch our gray hairs. "I am so sorry I'm growing old!" said a father while gazing on his sweet-faced daughter. Not because silver hairs are unbeautiful of themselves; but we associate them with decrepitude, a slow step, a staggering mind, a stagnant memory.

Age is measured not by time—we grow old because we lose the hope and aspiration, the bloom and charm of youth. How unlovely is life with its clubbed feet, its dimmed vision, its bald head, pim-

pled face and blossomed nose! What more cheerful than a graceful old woman, or a grand old man of eighty, in whom dwell the ardor of youth, and the peacefulness of an Autumn eve?

Infancy, age, strength, weakness, smiles, tears, hope, despair, success, failure, are only partial expressions of that force, which, like

§ 2. "A Thread of Gold,"

runs through every organized individual, vegetable or animal, grouping individuals into families, families into communities, and these into more complex combinations, where strife, conquest, disease, and death in turn prevail.

A little seed is planted in the earth, then a shrub, and ere long an oak shades an acre. A little cell, the first expression of physiological life, an infinitesimal bladder with fluid contents, keeps unfolding, and unfolding, until we see the worm, the butterfly, the bee, the bird, the elephant, or the mastodon, which makes the earth tremble with his tread. Even more wonderful is the new-born babe, poorest and most helpless of all. To-day he fills a cradle, to-morrow he makes and controls mighty engines, dragging millions of tons through the air swifter than the flight of a bird, or ploughing the deep with some monster vessel, contending with the tempest. A little later he seizes a chain of fire, and binds distant continents, until the pulse-beat of

Paris is felt in America. This variety of expression, the seed, the flower, the fragrance, the fruit; this wonderful force which converts the acorn into an oak, the cell into a mastodon, the babe into a Newton, sailing among the stars and proclaiming the marriage of distant worlds; this strange wonder-working force we call life, vitality. Its study increases in interest as ourselves become involved with it, and we more clearly understand our relations to time, disease, and health.

§ 3. Health a Birthright.

Occasionally a soul barters its body for some heroic stride heavenward, but such cases are exceptional. The religious martyr, a brave fireman, sailor, soldier, or, above them all, some silent, suffering woman, sitting beyond the gaze of vulgar eyes, tolling out her strength over some unfortunate child or unworthy husband, counting stars for a rosary, and snatching moments of slumber while the angels watch her wasted features. Such as these, there are, who find shorter paths to heaven; but, for most mortals, the way is steep and rugged, requiring a stout frame, strong limbs, and a brave, healthy heart.

Health is the birthright of every child well born, of every man who wisely uses his substance, of every woman who seeks, among other means of grace, a

wise knowledge of the laws which interrelate her body to its tasks and time. The most heavenly babe is wreathed in smiles; the bravest boy is not the sickliest; the most Christian woman thinks of herself least. The best man is free to use every power of body and mind for those more needy than he. Aches and ills may enter into Christian experience, but they are not a necessary part of it. He who would *do his best* must *be his best;* as every member of his body must be fruitful of strength.

The actualities submerge the possibilities of human experience; the latter find lodgment in only fevered visions.

The dreams of man define his heritage, and alone bound his possessions. He who lives not on the hillsides, or rides not mountains with the storm, and sees not the contending elements, nor numbers the stars, has lived but half.

He is a hard man whose face and form and thought tell us he is fettered by pig iron, steel rails, and the dry details of practical business. The rustle of parchment and ring of dollars make discord in the heart. You must eat the food of the gods if you would exalt the countenance. Said a beautiful girl, "Oh, sir! I am so little of what I *wish* to be!" and in her glowing face I read a prophecy of what she has since attained. Take your ideal, a robust form, elastic step, profusion of lustrous hair, eyes

like diamonds, tinted cheeks, ruby lips set with pearls, all animated by a loving, aspiring soul; compare this embodied dream of what is attainable in health, with the tame faces, weak backs and wasted forms, the blighted minds, hardened hearts, suspicious glance, tottering step; the aches and pains, and invalidism,—Is not health mostly a dream, and its attainment one of the lost arts?

§ 4. "Yankees?" or Americans?

Towards the close of the sixteeenth century, there appeared a new type of the *genus homo.* It is yet a disputed point whether he should be regarded as a distinct creation, or owes his existence to some evolutionary process best explained by Darwin. This type does not interest itself in its origin. Indeed, in one respect, it resembles Topsy, makes no distinct claim to parentage, and is rather flattered by the idea that it "com'd up" itself. This is the more agreeable because all else human is so inferior to itself, in ideas of government, politics, and religion. It adopted, and is now known, by the *nom de plume* of "Yankee;" and as such we shall refer to some points involving his history and capacity.

He came from some unknown shore to Plymouth Rock, which he seized and claimed by right of possession. The soil was worthless, and the new

proprietor had no capital except "brains," "cheek," and a pliable conscience. His knowledge of business was clearly shown by a system of advertising which arrested the attention of Europe. The Yankee had no means of his own, but a course of conduct similar to that which secured for him real estate, enabled him to obtain a share of the money brought by each immigrant.

He invited capitalists, teachers, and preachers; and by a liberal use of the imagination, a goose quill, and *tannate of iron*, the Yankee soon found himself at the head of a thriving colony. He proved himself a compound of trickery, trade, and energy, with an all-engrossing idea of absorbing every dollar and every soul which touched his shore. During the early settlement of the colony he became *converted*, and, like unto the olden times of *Israel*, the Yankee became "a chosen people;" by burning witches and hanging turbulent Quakers, he secured the divine favor, entered heaven, and brought away the supreme law for the government of all people. *All men are born free and equal;* hence he had a right to the soil equal with the natives, and as the latter had no firearms the Yankee became *sole* proprietor.

If an Englishman came to this new settlement with money enough to build a school-house and brains enough to write a book, the Yankee wrote

his name upon both book and building and claimed them. If a big-headed German, or an ingenious Frenchman touched the shore he was swallowed up. Poor Pat would hardly have time to get his brogues on before a spade would be thrust in his hand, and he set to digging canals and building railroads. In short, this long, lean restless, bragging, lying, trading, absorbing creature has swallowed up the Jewish Bible, the Christian Testament, the laws and literature of older nations, and almost every man, woman, and child, which have found a home in the New World.

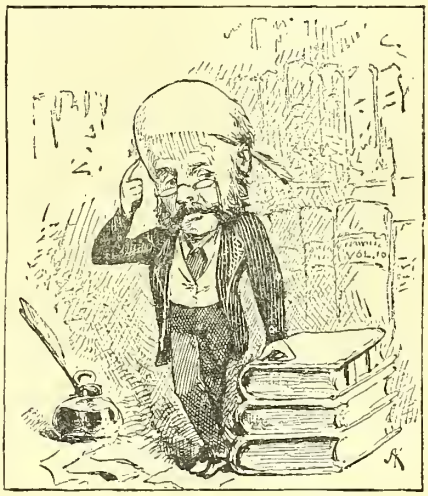


A YANKEE.

So intensely has he individualized himself that teachers and preachers, the schools and pulpits of the land, seem proud of the *sobriquet* Yankee. Every success is labeled "Yankee"—every invention is a *Yankee invention.* In short, though he is only

every twentieth person, yet by a piratical egotism he claims the attainments and possessions of the other nineteen. Every germ or gill of blood from England, Scotland, France, Germany, Switzerland, or Italy, which has been imported to this continent within two centuries must be dubbed "Yankee blood." The pride of being an *American* is mostly lost in the strutting peacockism of a *pure Yankee.*

His face is so familiar that it would be recognized at a glance in any capital of Europe; but one looks long before he can see in him the thought, benevolence, religion, philosophy, or culture which mark the leading features of foremost Americans.



THE AMERICAN OF 1976.

In mechanical enterprise and ingenuity, in architecture, common schools, literature, and commerce the American people have no mean position. Our orators, probably, outnumber those of all Europe, whilst the average American physique is quite inferior to that of the Old World.

We are only a few generations from a generous, well-nourished ancestry, with yearly contributions from England, Scotland, Ireland, France, and Germany, which continually pour rich blood into our depleted veins; but the exhaustive habits of our people are such, that the deterioration of one hundred years hence is not of uncertain prediction, unless health is better protected by an assiduous regard for hygienic laws.



TESTING ALDERMANIC QUALITIES.

The good-natured, old-fashioned men of our childhood are fast passing away—those aldermanic men of a generation past, who sat on store-steps and told stories,—who laughed and made others laugh; men of mirth and generous dinners, who could not stand straight and see their toes,—men who were happy and contented with themselves, and the human race generally.

We do see a resemblance to them occasionally, but these can seldom stand the test. If you were to tap them, you would find a keg of *lager bier* instead

of the natural contents of a healthy abdomen.

§ 5. Dyspeptic Pulpit.

The country parson's pastoral call is the signal for a rural festival. The boys are sent out to run down the old hens; and the matron resorts to every device that will render her table inviting. Pickles, pepper, "chow-chow," mince pie—so the good man asks our Father to bless the food. Does the reader suppose the Lord ever blessed a green pickled cucumber, or the pepper-box? If so, he has much to learn of the science of feeding.

It were as well to ask a blessing on twenty grains of arsenic, as over scrofulous meat and a red pepper-box; neither of which has any relation to this most beautiful of religious exercises.

The good man eats heartily, goes home, has the headache; and then prepares sermons that make the heart ache. Untold time, alone, will reveal the number of bad sermons preached by good men, because they had bad pickles in their stomachs.

The health or disease of a Christian minister tempers his mind and tones his theology. Students of Divinity should be thoroughly educated on all matters pertaining to their health, and the best means of preserving it. Piety and dyspepsia have too long been linked; and it is time both ministers and lay-



CORDIAL RECEPTION OF A COUNTRY PARSON. (See p. 11.)

men should know that a robust body, good digestion, and healthy physical exercise, are conducive to Christian culture; and that a cheerful mind and hearty laugh, are as good a passport to heaven as a long face. Disease clouds the mind, sours the temper, and robs the heart of hope. A man cannot continually sin against his own body and serve the Lord with all his talents.

§ 6. Why Farmers are Gluttons.

The farmer's virtue is mostly negative. The schoolboy is regaled with wise sayings from Cicero and Franklin concerning the virtuous tendencies of a rural life. Yet farmers are a simple class of people. They suffer little, sin little, think little, and seldom go to court but as witnesses or jurors.

The school teacher uses a word of four syllables, and he is requested not to use such "big words," as he is speaking to "*only an ignorant farmer.*" As though a farmer had any moral right to be ignorant, more than a minister, doctor, or lawyer! It is easy of explanation. He thinks he must *eat much to be strong.* So, to work hard for six days he continually gratifies his gluttonous appetite. On the Sabbath he forgets his rule, or reverses it. Because he does nothing he can eat all the more. Take a Pennsylvania farmer's Sunday breakfast,—ham, eggs, buckwheat cakes, saur krout, waffles,

molasses, etc., etc. Cleverly through, the boys bring around the fat horses, and Mr. Farmer goes to church. He is a "good" man, regular in attendance, prompt in payment of dues; and exemplary in *silence*, if not in conversation.

The minister is through with preliminary exercises, and takes his text; the spare, pale man has toiled through the week to prepare a sermon that may benefit the farmer; but before he gets half through, he looks down to see Mr. Farmer sound asleep, if he has not already been interrupted by his snoring. The good minister is trying to get at his head and heart; but the vitality of the farmer has gone to his stomach, to relieve it of mince pie and *saur krout.*

If farmers were to put into books and study that vitality, now wasted in disposing of food which they eat, *over and above the natural demand of their bodies*, they might rank among the best informed classes of the land. As it is, this large and productive class of our people are stupid and illiterate, because they do not know why they should, or are unwilling to control their appetites.

§ 7. Personal Influence

is next to heaven. All power ends in bending others to our own will or way of thinking. Only kings and emperors rule, be they crowned or not. Individual influence is founded not more on quality

and quantity of mind than body. It is largely a question of *avoirdupois*.

If you would be a leader of the people, secure the means of a large physical growth. We follow leaders larger than ourselves. Most politicians are portly men. New England has more brain than body. She has written the history, poetry, and music of America; and she has greater influence in the counsels of the nation than any other equal number of states. To secure it she sends large-bodied men to Washington. Other conditions being equal, *size* determines power in politics as it does in mechanics.



POLITICIAN.

LIBRARY

§ 8. Popular Credulity.

It would be amusing if it were not painful to witness the zeal with which the masses seek out and

patronize Patent Medicines, "Indian Doctors," Faith Doctors, and other charlatans.

One generation ago, the New York *Sun* received $5,000 to advertise Brandreth's Pills. By many the advertiser was regarded as a crazy adventurer. He soon retired with a competency. Since then, scores of others have succeeded as did he. It is stated that two-fifths of all moneys spent for advertising only give publicity to preparations of this kind. To say they do ten-fold more harm than good, is a mild condemnation of the commercial and moral robbery, involved in the manufacture and sale of patent medicines.

Indian doctors give little medicine among their own tribes, — they assume to cure by charms, dances, and mysterious words. Recently a tribe of Sioux put their "*Medicine Man*" to death, because he could not cure small-pox, which was raging among the "*papooses.*" Society should apply a similar test to the parasites who practice upon the people's credulity in the *Medicine Man's* name.

Faith Doctors.—These are they who cure by *laying on hands.* There is a truth in their pretensions,—the well may help the weak. A vigorous, strong hand placed on another's aching head, often dispels the pain, almost instantly.

We may not be able to explain *why*, or *how*,

but God has linked the human race in their sufferings as well as in their joys; and it is pleasant to think that a well-toned person may give joy, peace, and rest to a suffering one by mere touch, oftentimes. Yet, even this gift is prostituted by charlatans, and seemingly intelligent people are often carried captive by their pretentions. The following anecdote was told the writer as true in substance, some years ago:

A "Faith Doctor" had advertised to be at a certain place in Hooppole township, Posey County, Indiana, but was detained to complete a previous appointment.

On the day mentioned for his arrival a young gentleman from the rural district inquired for "*that air big doctor.*" A young horse-jockey, seeing an opportunity for a practical joke, announced himself as the "doctor." Inviting the verdant into the parlor, he accosted him with,

"Now, sir, what is the matter?"

Verdant. "Wal, Doctor, I'm deef!"

Jockey. "Which ear?"

Verdant. "Left ear."

Jockey. "Then turn around, sir." The new doctor boxed his ear soundly three times. After he had recovered his center of gravity, the "doctor" asked, "Now, sir, how do you feel?"

Verdant. "I think I hear better."

Jockey. "Call day after to-morrow for another treatment."

On the day appointed the poor fellow returned and brought two others to receive treatment.

CATERPILLAR CURE.—A little girl, when trundling a baby with several rolls of flannel about its neck, one hot summer's mid-day, was accosted by a gentleman with,

"Sissy, what are you smothering that child with flannel for, on such a day as this?"

Little Girl. "Mother did that. An old lady told ma if she put a *caterpillar* in the middle roll it would cure baby's whooping cough. The whoops will leave the baby and go into the caterpillar."

§ 9. Panorama of Death.

In New York City the funerals average four hundred and sixty per week. One half of these are of children who should live. Three-fourths of the deaths in this country are the result of diseases preventable or curable, under proper conditions of living. These are consumption, liver disease, fevers, etc.

Of the incapables in the United States there are

Insane	37,000
Idiotic	24,000
Blind	20,000
Deaf and dumb	16,000

Americans pay to dentists each year $5,000,000. This, notwithstanding dentists are like doctors and jails, necessary evils. Live right and you will not need them. The average time lost by women from disease is sufficient to give each a university education.

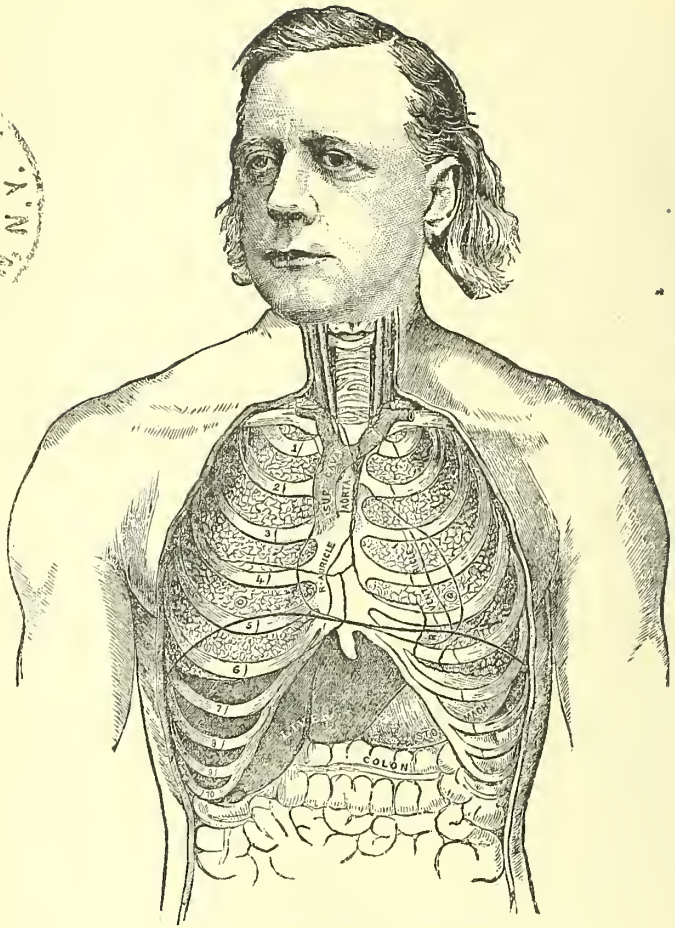
It were idle to attempt a computation of loss through doctors' bills, servants' hire, and time wasted by illness; but far and above all these must be estimated character undeveloped, and opportunities lost, which should fit us for something better.

§ 10. A Sure Remedy.

A knowledge of the body and its functions is the only safeguard for public health. It is not sufficient for physicians to know what the people need, or what they should do. The masses must know it for themselves. Health is the natural condition, and if doctors were paid the half for *teaching* the people they now receive for *drugging* them, society would be improved.

With our present advanced knowledge of physiology and hygiene, effectually taught in all our schools, and practically carried out in the households, the crime, disease, and dissipation which now bend the back of society, would be greatly lessened; and all true reforms receive an impetus which we may now dream of, if we cannot enjoy.

...TON HALL
FOR THE
...THE ...
MERCANTILE
...
ASSOCIATION



ORGANS OF RESPIRATION AND DIGESTION.

CHAPTER II.

§ 11. Wonders Within Us.

More wonderful than mountains and rivers, and dewy meads and glistening buttercups, is this "*house we live in*," so rare in its economy of

space, and perfectness of structure. So complex is it, with its deep and swift-flowing streams, filled with life, bearing its uncounted fleet of microscopic vessels, each vessel laden with life and joy, or song and sorrow, for some particular part; its wonderful system of telegraphy, which unites the smallest tissue to the great whole. Its courts of reason and art, its cathedral, its solemn chants, its war, work, patience, petulance, pity, and a thousand other children of the soul. The soul itself. All these, and this. Not standing, but restless as the sea, changing, changing forever. It of to-day is not to-morrow.

§ 12. Life and Death are Twins.

The cradle and the grave are side by side—we must live to die, and die to live. Every heart-beat two millions of blood-cells are born—every heart-beat two millions die; every minute one hundred and forty millions are created, and as many carried to the grave. I cannot move an arm or take a step without inviting death; I cannot see a star or watch a humming-bird without waste of optic nerve; and every flight of fancy, or spoken word, or strain of music, has death for a companion. "I die daily," yea and more; he is not who was an hour ago, whether he will or not, the word is onward,—onward to the great forever—silently, noiselessly, to the great, unknown forever.

§ 13. Waste and Repair.

Mr. Huxley's application of the correlation of forces, to preserve the equilribium which we call health, is the simplest basis for a practical understanding of hygiene; for the upbuilding must be as constant as the waste. In childhood the waste is less than the building process; during the middle age they equal each other; and during the decline, or old age, the repair is less than the waste; and gradually, the life forces give up the contest, and death claims its own.

The constructive process is carried on by means of organs called *digestive*, by which food is dissolved, thence blood is formed, from which the several tissues are regenerated. These digestive organs are of infinite variety, adapted to the species or condition of the animal; the cow has four stomachs, the rabbit three. Fowls have a crop and a gizzard, where the gravel grinds the grain preparatory to further digestion.

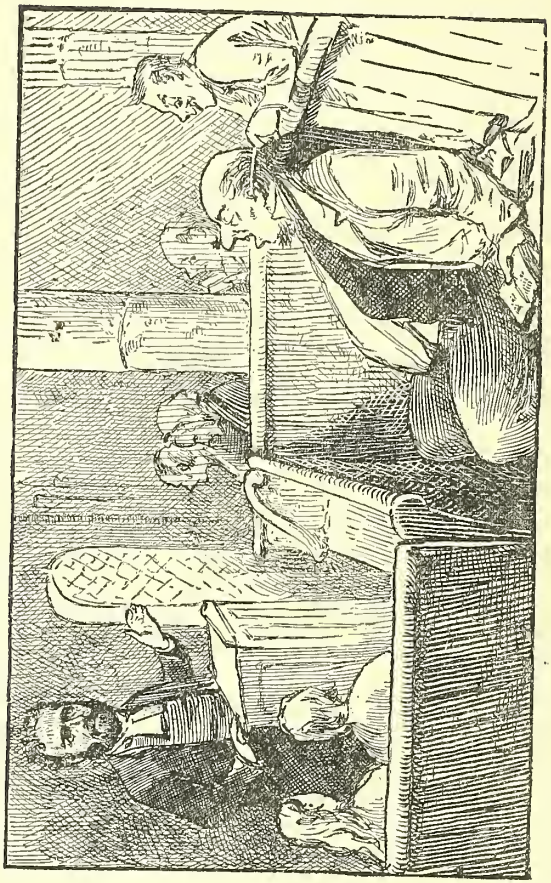
§ 14. The Varied Voice of Hunger.

Hunger is the body's prayer for food. The general desire for life is the multiplication of the prayers from each atom of the body. Hunger is the bugle-call "to arms," the dining-room a battle-ground. The Genius of Death slowly picks the

body to pieces; the skin, kidneys, lungs, etc., are perpetual grave-diggers.

Slowly we crumble, and ere long would give up to inanition, did not hunger warn us to replenish the table. Spring, Summer, Autumn, and the ingenuity of man, combine to furnish material for repair. The process of destructive assimilation is obvious from the pounds discharged from the body during twenty-four hours.

This waste is replenished from the blood; each of the tissues has power of selecting from the blood what is necessary for its repair. Good blood is the product of digestion, and must have all the elements of the several tissues in due proportions. Hunger is the sense of regeneration, and resides in the tissues, though we receive the dispatch generally in the stomach and mouth. This demand for food is regular in healthy persons, the frequency of its occurrence depending largely upon the habits and occupation of the person. A man in outdoor, active exercise, should feel this desire for food thrice daily; if he indulges his appetite oftener, the desire will conform to regular habits of eating. Those engaged in sedentary employment should have less frequent demands for food. The repeated desire for food by children is largely the result of too frequent feeding by the nurse or mother. The hours for feeding children should be so separated



DR. MARTIN LUTHER IN THE ACT OF DELIVERING HIS SUNDAY MORNING DISCOURSE TO A CONGREGATION THAT HAD BREAKFASTED TOO HEARTILY. (See p. 14.)

that their stomachs can have periods of rest. After the first year, children will do well on three meals a day; and it is unwise, or worse, to feed them oftener. Opium, alcohol, and tobacco diminish the appetite, and their much use allays the desire for food altogether.

§ 15. Food Determines Beauty.

Royal souls are frequently born in the kitchen and bred in the dining-room. It is an established fact, that a common egg may become a Queen, or common bee, as it is fed on common or "royal jelly." That when bees lose their queen, they take a common egg, enclose it in a *royal cell*, feed it with "*royal jelly*," and the perfect queen bee will appear in due time. "Thus having not only their *bodily organization, but their psychical nature essentially altered by the nurture they have received.*" (Carpenter's Mental Physiology, p. 60.)

This is as true of human as other queens. Coarse, gross, and gluttonous habits of life degrade the physical appearance. You will rarely be disappointed in supposing that a lucid, clean, clear-skinned, bright-eyed, self-respectful lady, is very careful of the food which forms her body and tints her cheek; nor are you unwise in supposing that great, coarse, unclean, dull-eyed, greasy-faced man,

is regardless of table habits and table furniture, if he can only get a sufficiency of rich, coarse food, to fill his capacious stomach. Two tomato worms are differently fed. One on the coarse leaves of coarse plants, the other on the petals of fragrant, tinted flowers. The latter will be a beautiful thing, tinted like unto a rainbow; the former will be plain, and unlovely. Just as true is it of boys and girls, and men and women. The quality and quantity of the materials which form their bodies, must determine their appearance.

We see it in the bloated form of the inebriate, as compared with his opposite, but it is as true of what we eat as what we drink.

Goethe lived carefully and abstemiously, and carried his personal beauty to old age; while Madam von Stein lost Goethe's love by gross habits of eating sausages, and drinking strong coffee, which destroyed her beauty. Many a beauty has been slain by greasy pastry, griddle-cakes, and other indigestible substances. Let it be written on the understanding, *beauty is won by a wise diet, and lost by gluttony.*

§ 16. Deportment at Table.

"An animal is judged of at feast." A man betrays his breeding at table. Unconsciously he tells you he is a gentleman or a boor. If you want your

philanthropy tested, come with me. Here is a Western bound train, stopping "twenty minutes for dinner." Into the dining-room rush two hundred of that unwashed, unsanctified heap of material called human. Did you ever watch a lot of pigs contending for swill? Scrambling, shoving, crowding and gulping. Do those people remind you of the pigs? Never have I loved my people less than at a hasty, hotel table. Indeed, I could only tolerate them when I compared them with the people from other lands, at same table with them. Then I was forced to see that others were only less decent than ourselves.

The higher we ascend, above the strictly animal line of conduct, into the æsthetic, the more agreeable we are to our fellow, especially if he sits opposite us at table. Dr. Abernethy was strictly philosophical in his advice to an American official who consulted him concerning dyspepsia.

Dr. A. "So, sir, you had dyspepsia in America."

Official. "Yes, sir."

Dr. A. "And you have come to London to remain some months?"

Official. "Yes, sir."

Dr. A. "You will need no treatment, for while you remain, you will probably be compelled to eat among polite people."

Dr. Abernethy conveyed the idea that a truly

polite man could not have dyspepsia. He was not very incorrect.

I once knew a Quaker woman who said those who came to her house to live, gradually improved in appetite and health. Her table was exquisitely neat, and the food so prepared that its sight was an appetizer. The latter was served in small quantities; and one felt that to eat *largely* would be an outrage. Conversation was cheerful, facetious, but seldom personal. Over and above all was the quiet, assuring manner of the Quaker woman, more tranquillizing than aught else. The *gentleman* is not only careful not to offend, *but he is bound to entertain those about him.* In short, eating should be done as gracefully, as moderately. The best appetizers are not the contents of the castor, more than a well-ordered mind, which is quick to perceive and supply the needs of its neighbor.

§ 17. Gluttony

is the parent of gout, dyspepsia, kidney disease, apoplexy, corpulency, rheumatism and neuralgia; also of a score of other unchristened children.

I have never met true refinement in the person of a gross eater. Great geniuses are sometimes great gluttons. The best type of gentlemen never are. Goethe and Thorwaldsen were very considerate of their food; and when we see these giants

making a breakfast off a glass of milk and a roll, we have learned from more than their pens and models.

This habit tarnishes the soul, and publishes its work on the face.

Eye. — It generally robs the eye of intensity of expression, and color, also of brilliancy,—when it leaves the eye still sparkling, it surrounds it with mottled, sodden, puffy or high-colored, half-animated flesh, leaving it like a jewel set in putty.

Gluttony and the Mouth. — Wreathe your mouth in smiles by spare eating. Gluttony thickens the lips, and imparts an indescribable coarseness to them. It robs them of redness, ploughs fissures, and makes cracks in them. The glutton's mouth may remind us of cod-fish,—never of kisses.

Effects of Gluttony on the Nose.—Particularly upon the nose does nature take her revenge. I never saw an unexceptionable nose upon a man who habitually ate or drank to excess.

The nose is a promontory from which the topography of life and character can be studied.

Pimples, blotches, minute blood-vessels enlarged and straggling over the surface, a purplish tint, thick skin, and a certain unspiritual or super-animal expression are some of the means nature uses to expose the habits of a glutton.

On the other hand, we rarely meet a "clean" looking man who has lived forty years, free from disease, unless he is a small eater.

§ 18. Shall we follow Nature?

Certainly, if you can find her; but be careful you do not get after some *old hag* instead. The glutton finds her in a yard of sausage; the drunkard sees her in a glass of grog; the dyspeptic in every abomination which gratifies his insane appetite. A celebrated surgeon of Philadelphia, once said to a medical class of three hundred, "Young gentlemen, with all your theories concerning diet, you have much to learn. You have heard much relating to animal and vegetable diet, etc., etc.; but my advice to you is, if a little child crave a little salt, give it. If she crave much salt, or pepper, or vinegar, or pickles, give them. '*Nature*' *is much wiser* than you are, or we."

He supposed a case of dyspepsia; it may have been inherited from a mother, certain it is that the '*Nature*' he referred to was the miserable old beldame which unphilosophical doctors, and drunkards, and dyspeptics follow all their lives.

You may know Nature by the company she keeps. Her friends are *sweet breath*, sound sleep, clear complexion, bright eyes, strong back, a cheerful disposition, a clear head, and a merry laugh. If you have

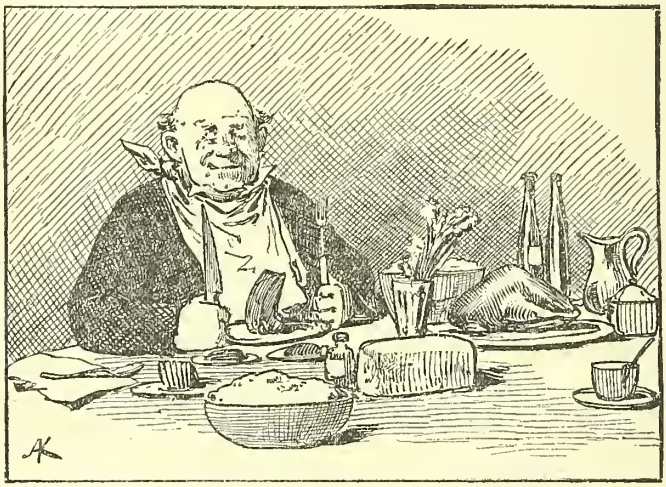
followed her to irregular meals, wine and wakefulness, to aches, pains, and loss of sleep; if you find her companions have a tobacco breath, bad teeth, red noses, pale or pinched features, sour temper, domestic strife, irreverence, no matter how much they may talk about '*Nature*,' you are following a false goddess.

Our appetites are often determined before birth; and bad habits beget over-mastering impulses, which many mistake for natural demands; but it is no safer to follow them than the behests of a *lunatic*.

§ 19. How far Instinct should guide Eating.

The bird and bee trust safely to their instincts. The little duck leaves its shell with a sublime faith and plunges into the water. With not less safety or certainty may a boy of twelve trust to his instinct, if he were properly born and bred. Most persons can trust their appetites implicitly after weeks of rest, and a perfect absence of condiments, stimulants, and narcotics. The highest, broadest, and noblest parts of man are his instincts. A perfectly healthy man may be a law unto himself; this does not apply to one in a million, however. Ruskin says, "the greatness or smallness of a man is determined at his birth;" but, before its birth, the child has appetital tendencies which fetter him through life. For invalids, and especially

dyspeptics to make their appetites supreme, is no more sensible than enthroning a maniac. "Nature" is a much abused term; she is always gentle, abstemious, wise, safe, temperate. When we look for her in our own selves, especially after we have lived a gluttonous or vicious life for years, she is generally "not at home." The reader is safest after



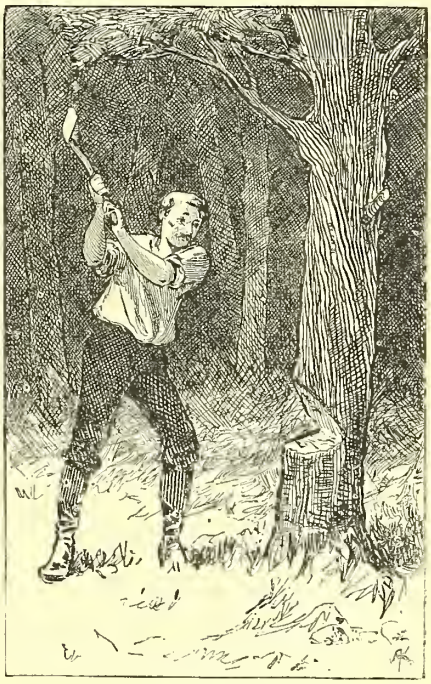
"THE GENTLEMAN WHO BELIEVES IN FOLLOWING 'NATURE' WHILE AT TABLE, IF NOWHERE ELSE."

a careful study of hygiene. Then she may set her house in order and take her seat at table. Better *know* when and what to eat than *guess* at it.

Those who prate most about what "nature" demands have by their vicious indulgences removed themselves from her influence. As gluttons and gourmands, they give to their perverted appetites the appellation of "nature."

§ 20. Shall Appetite be Tempted?

Animals in their natural condition have regular hours for eating, exercise and rest. The wild pigeon dines as regularly as the sun moves. A healthy appetite craves food at appointed hours. The English laborer wants and eats five meals a day—the American three. Feed your child three times a day only, and that often only will it call for food. Feed it ten times a day and the demand for food will correspond with the hour of feeding. Feed it irregularly and often and it will soon become a real *American* baby, crying for food as often as its mouth is empty, nervous, peevish, dyspeptic. "Lead us not into temptation," should be repeated at every street corner, and as often as one meets a pea-nut stand. John Bull fills his pockets with sandwiches before he takes the cars,

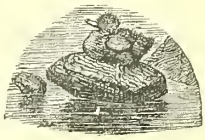


THE BEST APPETIZER.

Jonathan, his, with newspapers; but on every car are candies, nuts, fruit; and at every station apple pies, and popcorn, are temptingly thrust in our ears and eyes. Candy-stands, and the "cheese-and-cracker" department of grocery stores ought to be suppressed. Every grandmother shows her affection by loading the plate, and urging us to eat. Every one's "Golden Rule," *Eat only at regular hours, and never then, unless you are hungry, nor oftener than three times a day.*

§ 21. How to Secure an Appetite.

Wait. Time, "which befriends all the sad and disappointed," will not forget you. Abstain utterly from food; you will get hungry by-and-by. It is a real luxury to be *hungry;* try it. See how clear your head will be; how much better you will think. The best thoughts are not born upon a full stomach. How many wretched people there are who regard it as a misfortune to lose a meal. Never sympathize with them. They are always unthrifty or diseased. Next to *time*, *outdoor exercise;* especially if your employment is within doors, and your occupation sedentary, mountain air, morning walks, active exercise and time are the best appetizers.



CHAPTER III.

Some Things that Concern Women.

§ 22. Of Queens at Home.



WITH an acute sense of the wrongs, deprivations, and disabilities of women, and a desire for her presence and influence in every department of life, where she can, with profit, work for her own interest and her brothers', the writer still claims there are some things she has no right to do. She has *no right* to be ignorant or indifferent to the practical duties of a well-ordered household; *no right* to spend her time in the routine of a frivolous, idle or fashionable life. She has *no right* to be ashamed of the kitchen, and install an underbred, ignorant person, over matters so important to herself, and every member of her family, as is the selection and preparation of daily food.

She has *no right* to be ignorant or indifferent of the necessity or the art of dressing her child or herself, in a becoming and healthful manner. She has *no right* to allow her girl to enter womanhood without such knowledge, and convictions, as shall prove the surest safe-guard against disease, and in favor of a healthy, happy life. She has *no right* to waste her life in wrangling, while three-fourths of all children are born of ignorance, vice and crime, which blossom in their after lives, and are entailed to their offspring in turn. She has *no right* to shirk a healthy maternity. Oh, America! Thou need'st *honest* politicians to guide thee, strong arms to defend thee, and virtuous voters to sustain thee; but more than all these dost thou need a *wise, conscientious motherhood!* Without it, the first three are soon wasted; with it, thy children will supply them all; and thy vestal fires will burn forever.



THE TO-DAY'S QUEEN OF THE KITCHEN.

§ 23. Dignity of Domestic Life.

Americans are ashamed of work, especially domestic labor. We swindle ourselves with plati-

tudes which we assume to, but do not, believe. "One person is as good as another if he conducts himself with propriety," "Labor is honorable," and Fourth of July orations go well together. A lady teacher, of large experience, regards it unbecoming her position to know anything about dinner before the hour for eating arrives. She has charge of a large school of young ladies, is regular in religious and other exercises—talks wisely to the girls about appearances, music, needle-work, art of drawing, etc. She graduates a large class every year—a lot of pale-faced, small-waisted, falsely-dressed creatures—"finished" in brain, body, art of dressing, and conversation. Years for music and French, not one day for what would fit the girl for domestic labor. Her bad complexion is explained when you look at the doughnuts, griddle-cakes, and biscuits, sausages, and white bread she eats.

The teacher is *ashamed of domestic work*, and she graduates her pupils with a similar sense of false propriety. There are few fashionable women who respect work or clothe the affairs of domestic life with dignity. What pertains to the kitchen is regarded as drudgery; the cook requires as much brains as the Governor of the State, while society thinks the commonest vagrant girl in the country is good enough to cook our food. Yet the character

of the child is largely determined by Bridget's cookery; and meanwhile the indolent hands of the "lady" are bejeweled and on exhibition. Poor cooks are continually undoing the best work of the pulpit and school-room.

A neatly set table inspires us with a sense of dignity and courtesy which we cannot feel when dining from rough boards. Simple, healthy food, exquisitely prepared, and served upon shining dishes, and brilliant silverware, with snowy napkins, and glistening goblets, a gentle blessing, and cheerful conversation, embrace the sweetest communions and the happiest moments of life. The health question must be regarded as a moral one, because its laws and the *Ten commandments* have a common Author.

Clothe the table with such thoughts, then wisdom, wit, and Christian courtesy will vie to make the meal hours the best of the twenty-four.

She is a true queen who knows how to preside over an artistic table.

He is a true king who plays the host to perfection.

§ 24. Our Coming Mothers.

The American girl is eminently a prodigy. She hurries from pantalets to maternity, where her possession consists chiefly of cradles, babies, and baby graves, until thirty; then, with broken health,

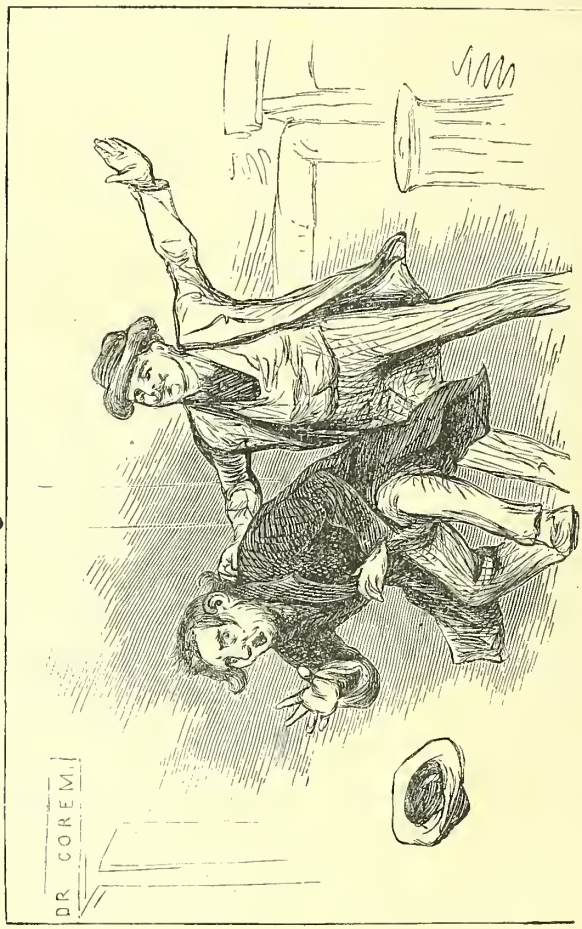
the mother enters the "*invalid corps*," and only in exceptional cases is she heard from afterwards. The physical condition of our women is such, that only a fair proportion is fit for maternity at their best; while our graveyards enter a silent protest against the mad stampede to motherhood, before the girl has education in, or common familiarity with, the duties or necessities of so imperial a position. She oftentimes marries before her own bones have attained their growth or wonted hardness. As a result, two-fifths of the graves of our land cast shadows no longer than walking-sticks.



MARRIED AT 16—DIED AT 26. LEAVING SIX FEEBLE CHILDREN.

Recent reports of Cincinnati tell us, of children born in a given year, one-half did not live to attain the age of twelve months.

It would be quite safe to offer premiums on all *healthy* girls of sixteen years, as long as so few are fitted to answer the requirements. She who wins the medal should have clear skin, rosy cheeks, bright eyes, sound teeth, red lips, an abundance



THE "FAITH DOCTOR'S" SURE CURE FOR DEAFNESS. (See p. 17.)

of lustrous hair *of her own growth*, full form, strong limbs and back, no aches, pains, corns or corsets, and in short, a healthy, bright, sunny-tempered girl of sixteen, weighing one hundred and fifteen pounds. What proportion does the reader think will apply for the medal, after reading these conditions?



16 YEARS AND 115 POUNDS.

Thackeray said, American women were "handsome, discontented creatures."

The Abbe Robbin said of American ladies: "They are tall and well proportioned; their features are generally regular, their complexions fair, and without color. * * * *

At twenty years of age, the women have no longer the freshness of youth. At thirty-five or forty, they are wrinkled and decrepit. The men are almost as premature."

Beaujour, French consul-general to this country for ten years, said our girls were very beautiful, "But this beauty fades and passes in a moment. At the age of 25, their forms change, and at 30 the whole of their charms have disappeared."

Nor does Michelet except Americans when he says, "Woman is an exquisite invalid, with a perennial headache, and nerves perpetually on the rack."

§ 25. The Neglected Girl.

The bane of American motherhood is mostly chargeable to the miseducation of our girls. Of the school-days, few are devoted to physical or physiological culture. Before the pupil has mastered the first principles of a practical course of study, the æsthetical is made paramount. Music, needle-work, and the studies commonly pursued, involve little of value, so far as they relate to her health, or its loss. She is imperfectly clothed, nor dieted, nor exercised. *She meets disease half way*, falls an easy prey; and, before she fairly enters girlhood, shows a tendency to unnatural conditions, which often become permanent.

A lady teacher said to the writer, "We do not graduate our pupils until they have spent two weeks in the kitchen to learn the art of cooking." On this she based a claim to patronage. *Two weeks in the kitchen*, and two years to misunderstand boarding-school French! Two weeks in the kitchen, and twice two years to music and needle-work! While to be a first-class cook requires time, culture, and natural ability equal to that needed to govern a battalion of soldiers.

So universal is the frailty of American girls that professional men of large experience regard their sex and their debility as synonymous. Not doubting the fallacy of such a conclusion, the writer still sees but

one way to disprove it, and at the same time give the girl the health she rarely enjoys; that is, by giving her a thorough physical culture, from the third to the sixteenth year; and at the same time let her be educated into a conscientious regard for habits and laws which perpetuate the best conditions of both body and mind.

A silly girl rarely makes a sensible woman; and on the other hand, a healthy, sensibly educated girl seldom fails to become an important member of her circle in after years. In the earnest efforts of re formers to enlarge the sphere of woman's labor and usefulness, they have almost forgotten the needs of wifehood and home.

§ 26. A Child's Battle for Life.

Children learn to cry long before they can laugh. Only half of them survive childhood. The ignorance and ingenuity of cook, nurse, and mothers combine to wage war against the babies' existence. The doctor* joins the enemy with diluted whisky, and the child is conquered. The battle has been renewed not only every day, but ten times a day, with nipple and spoon and bottle and whisky—bad in quality, worse in quantity. The little stomach is a "raw recruit;" but it is compelled to do the service of a veteran.

* The Public Health Association of New York city recommends for a young child whisky and water when it is thirsty.

A mother brought her child to the writer for advice. It was a real American baby, built after the design of a Rutabaga turnip, big about the head, and tapering to a point like a tadpole, a large scrofulous abdomen, with small neck and wasted limbs.

Dr. E. "Madam, your child is scrofulous, and is suffering from imperfect nutrition."

Mother. "Doctor, what can you do for it?"

Dr. E. "I can cure your child, if you will take it home and cover its bare limbs with flannel, feed it only three times a day on plain, wholesome food, let it play in the open air, and bring in your stove-wood."



DOCTOR, LOOK AT HIS POOR LITTLE ARM!

Mother. "Doctor, what do you mean by 'plain, wholesome food?' for his appetite is very delicate, and if I did not prepare dainty dishes for him, I believe he would die for want of appetite."

Dr. E. "Do not worry, Madam, about his dying. Feed him oatmeal gruel, Graham bread, fruits, a little lean meat, and no 'nick-nacks,' and at

regular intervals: his appetite will come to him."

Mother. "But, Doctor, look at his poor little arm! One stick of wood would break it off; then, every time he goes out doors he takes cold."

So the fond, foolish, mother took her child home. She would not allow him to breathe pure air for fear he would catch cold, as did the mother who would not allow Fritz to go into the water until he had *first learned to swim.*

She pandered to his false appetite with tarts and tit-bits and pastry. The child grew *paler* and *paler*, and the curtains were drawn a little closer, and a little closer, to shut out the least stray streaks of sunlight until, by-and-by, the foolishness of the mother prevailed over the providence of God, and the child died. It died because the mother was too ignorant to care for it. The same treatment would have killed the kitten.

Over the cradle, the mother is consoled by such phrases as, "The mysterious Providence of God," "The Lord giveth, and the Lord taketh away," etc., etc. Such remarks do not apply to the occasion, and are simply cant. That a "Providence" does surround our misfortunes, and that the mother or others may learn lessons of faith, patience, and humility, is not to be questioned. Still the fact stands alone, the child died *because it was improperly cared for.*

The Lord mourns over that empty cradle with the mother.

In a New England city were ladies who pampered their poodle-dogs as many mothers do their *Charlies.* When these poodles became dyspeptic, they were sent to a notorious "poodle doctor" without the city. In due time the little patients were pronounced cured, and returned to their mistresses full of health and mischief. The doctor's treatment was a mystery, and is explained as follows: The poodles had ample play-ground, in the middle of which was an open shed, through which the pure air circulated from sunrise to sunrise again. Blankets and shavings furnished a comfortable bed for the invalids, who were provided with milk twice a day, lean meat once a day, and a long whip three or four times during the day. Simple diet, pure air, and ample exercise restored them to health. The same prescription would save many a pampered "Charley;" then mothers' hearts would not be widowed, and the child would not go up over the mountains to God.

§ 27. The Last American Child is Born

unless society retraces its steps. There is, and will continue to be, the olden number of babies; but *children* we do not see any more. By *children*, I mean sensible, modest, respectful specimens of the *genus homo*, between the ages of five and fifteen

years. One who has not been to Palestine or a fashionable boarding-school, who does not "know" threefold more than her mother, who does not know enough to interrupt elderly people in conversation, who will wait until grandfather is served at the table, who will be as respectful to servants as grandmother is; in short, a quiet, modest, healthy, cheerful, obedient, respectful little girl; or a boy between the ages mentioned, who does not chew tobacco, or smoke cigars, or drink, or belong to a "fast" base-ball club, who does not speak of his father as "the governor," or call him "old man;" who has ever learned and not *forgotten* the "sir," or "mam," when addressed by one old enough to be his father or mother. A modest, respectful, polite boy. One almost feels "mine eyes would grow younger" at such a sight.

Europe is still an "*old fogy*," and is proud of her children. Lord D—— recently addressed the Montreal Normal School, as follows: "I confess if there is any criticism which I have to pass upon the youth of this new country—I do not say of Canada especially, but of the continent of America—it is that I have been struck by the absence of the deference and respect for those who are older than themselves, to which we still cling in Europe. I have observed, in traveling on board the steamboats on the St. Lawrence, children running about from one end to the

other, whom, more than once, I have been tempted to take up and give a good whipping. I have seen them thrust aside two gentlemen in conversation, trample on ladies' dresses, shoulder their way about, without a thought of the inconvenience they were occasioning, and, what was more remarkable, these little thoughtless indiscretions did not seem to attract the attention of their parents."

It sounds strange to hear a man of culture talk about the necessity of childish politeness. As though a true-born American baby had not an inherent right to trample on every law of politeness and good-breeding! As though he had not a right to be a "puppy," or a social pirate, or anything else he pleases! As though the saucy little impertinent compound of "boarding-house manners" and embroidery, should be respectful to her mother or anybody else!



LITTLE IMPERTINENT GIRL.

Seriously, we have our *kindergartens*, and too much cannot be said in their praise, if their teachers are competent; and we spend largely of our means for common school purposes; but the shame and crime of American parentage are exhibited in the large proportion of impertinent and impolite children which issue from homes of worldly wealth and Christian pretension.

The observer is often at a loss where to place his outraged sense of propriety, whether, as did Lord D——, in a desire to punish the children, or to let it rest on the underbred and indulgent parent, who, by lack of administrative power, looseness, or vagrant views of "liberal education," is primarily responsible for the ill-conduct of the child.



CHAPTER IV.

§ 28. Teeth and Digestive Organs.



TOOTH building is a simple, natural, painless process. If mothers eat proper food before the child is born, and during the nursing period, the teeth will appear at the proper time and without unusual excitement; the child will suffer no functional disturbances and soothing syrups will be unknown.

A Mother's Story. A mother once said to the writer, "Before my first child was born and during the nursing period I craved toast and coffee; eight months after its birth the teeth began to appear. They were pale blue, poor, and soon wasted; *soothing syrups* and sleepless nights I ever associate with those months. Before my second child was born, and afterward, I ate largely of codfish. Three months after the birth of Hector the little pearls appeared, beautiful and bright. During the formation of his teeth I never lost an hour's sleep from the child's illness, and he

has never tasted soothing syrups or any nostrum to quiet pain or secure sleep."

This anecdote explains the whole matter. Mothers should disabuse their minds of the thought that children must be more sickly, or sensitive, during this period than at any other time.

The ignorance of mothers on this point is only equaled by the wickedness of infant destruction occasioned by all those cordials which produce sleep, and impair the mind and digestion of the child. Material for enamel of teeth is found in fishes, lean meats, vegetables, and the hull of grain; and if these articles be used as diet during the forming process, the child has a guarantee for good teeth.

The lion's whelp has perfect teeth from meat; the buffalo or bison, from grass alone; and the elephant builds teeth to outlast a century from simple vegetables. Our cats, calves, and dogs have no toothache. Good vegetables, grains, or meats ever make good teeth if properly used. New England builds the best teeth in America from beans, brown bread, and fish. Sugar, starch, butter, lard, and the different preparations of white flour have not the elements from which perfect teeth are made. Brown bread contains a "mouthful of blessings."

Parents need a *quickened moral sense* which will deny their children sweetmeats, cakes, and whatever else deprives them of good teeth, and that will give

in their stead unbolted bread, meats, milk, and fruits; in short, almost any food not deprived of its natural elements.

§ 29. How to Preserve Teeth.

First. Avoid hot drinks. The still-fed cow soon loses her teeth. The warmer her mess the sooner they decay.

Second. Remove all substances from between the teeth after each meal. Tooth-picks should be of wood or quill,—of metals, the gold is preferable.

Third. The best dentifrices are a soft brush, soft towel, and soft water.

Fourth. Avoid cracking nuts with the teeth, also smoking and chewing tobacco.

Fifth. Keep your teeth bright by abstaining from vinegar and chewing crusts of bread and hard crackers.

§ 30. Healthy Human Digestion

Depends largely upon the proper use of teeth. The formation of the first, or *milk teeth*, commences three months before the child is born. They are twenty in number, and are completed when the child is two and a half years old. About the fifth or seventh year these begin to give place to the permanent teeth. The fangs of the first are absorbed, and gradually the second set is formed. The

latter are thirty-two in number, and are complete, generally, about the seventeenth year, but sometimes later than the thirtieth year of age.

For convenience the teeth may be divided into incisors and molars, or, *cutters* and *grinders*.

Enamel of Teeth. The crown is covered by something analogous to glass. It is the hardest of all organic structures, and if once destroyed is slowly or never repaired. This incrustation of enamel is protected by a membrane about one-thirty-thousandth part of an inch in thickness, closely adherent, and called the cuticle of the enamel.

The body of the tooth is composed of dentine or *tooth ivory*, which is analogous to bone, but much harder, and less capable of repair. Inside of this is the pulp cavity, in which are nerves and blood-vessels. This is the only part of the teeth endowed with sensibility.

Comparative anatomy evidently teaches that the human race is designed to live on a mixed diet; but experience has taught that man can live indefinitely on a diet of either animal or vegetable composition.

§ 31. The Mouth a Sugar Factory.

Solid food should be retained in the mouth until it is divided by the action of the teeth, without which stomach digestion is prolonged and difficult. A neglect of mastication is a common cause of



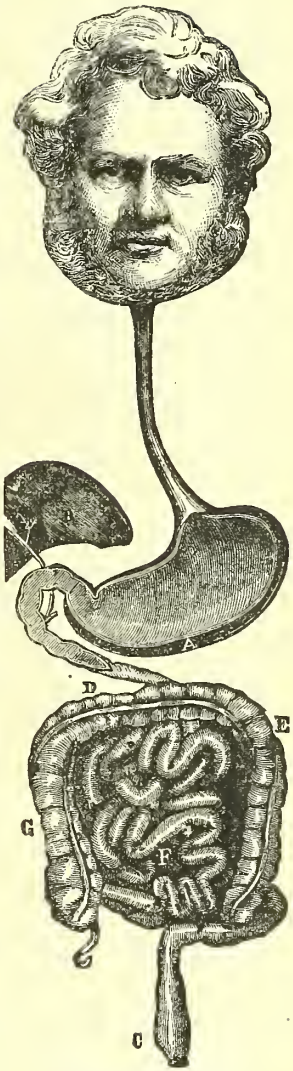
THE OLD LADY'S CATERPILLAR CURE FOR WHOOPING-COUGH. (See p. 18.)

dyspepsia. During the comminution of food in the mouth it becomes saturated with saliva, which is necessary to timely digestion of starchy substances.

About three pints of saliva are secreted in a day, by three pairs of glands situated near and emptying into the mouth. The importance of this saliva is obvious from the following facts:—*First.* Starch cannot subserve purposes of food until after it is converted into sugar. *Second.* A granule of starch is instantly converted into sugar by being saturated with saliva.

Iodine brought in contact with starch yields a *blue line.* Mix starch with saliva and immediately apply iodine, which is the chemical test for starch, and you will fail to secure the *blue line.*

Now apply the chemical test for sugar to the compound of starch and saliva and you will satisfy yourself that the mouth



DIGESTIVE APPARATUS.

A. Stomach; B. Left lobe of liver; C. Rectum; D. Transverse colon; E. Descending colon; F. Small intestines; G. Ascending colon.

is a sugar factory, or that saliva converts starch into sugar.

The tube leading from the mouth to the stomach is called Æsophagus, which serves to conduct the food to the stomach.

§ 32. Stomach secrets Solved.

Dr. Beaumont contributed largely to Physiological science by experiments upon Alexis St. Martin. In these the process of digestion was exposed to actual observation, which rendered facts to prove what were before mere views of conjecture. Thus were studied the action of the stomach and its juices upon different articles, and upon the same kind of food differently prepared. For instance, the time required for digestion of uncooked cabbage, two hours and a half; cabbage with vinegar, two hours; boiled cabbage, four hours and a half.

In this way theoretical propositions have been gradually substituted by positive knowledge. Add to this the labors of organic chemists, who have determined the composition and food value of meats, vegetables, and fruits, and dietetics approximates a science.

§ 33. The Stomach and its Work.

It is a pouch situated beneath the diaphragm towards the left centre of the *trunk* of the body. (See p. 55). In shape it resembles a bagpipe. Its capa-

city varies from one to five pints, in rare cases capable of holding from two to three gallons.

The stomach is constructed of three (or four) coats, a serous, muscular and mucous.

The inner or mucous coat is the most important in this connection, containing as it does gastric and mucous glands. The former secrete from one to fourteen pints of gastric juice in twenty-four hours. The secretion from the mucous glands of the stomach has no digestive property so far as known.

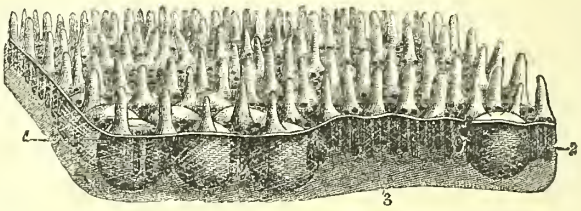
Gastric juice dissolves the albuminoid portions of food. Its quality and quantity largely determine the character of the digestion. Gluttony, anger, fear or fever, frequently arrest the secretion of this stomach-juice. Under their influences the lining coat becomes red and dry, or pale and moist. At such times, Dr. Beaumont informs us, large quantities of water are immediately absorbed, while solid food remains in the stomach undigested for twenty-four or forty-eight hours.

After this second stage of digestion the food is passed in small quantities to the duodenum or second stomach, where it meets the pancreatic juice and the bile. Here occur the third and fourth stages of digestion.

In the twenty-five feet of small intestines, following, the fifth stage or

§ 34. Bowel Digestion

takes place. Physiologists have not clearly defined views concerning the function or action of the intestinal juice secreted in the jejunum and ileum. The importance of this stage of digestion is, however, evident from the facts that the nutritious properties of the food, chiefly, are carried to the blood from this portion of the alimentary canal, and that a very large proportion of the entire digestive juices are here secreted. According to Murchison, the salivary glands secrete in twenty-four hours three pints; stomach, twelve or fourteen pints; pancreas, twelve



GLANDS WHICH SECRETE INTESTINAL JUICES, MAGNIFIED.

and a half pints; liver, two pints; while that secreted by the small bowel proximates from forty to eighty pints. Here, however, the digestion is effected by the combined action of all the digestive juices, so that we have hitherto been unable to correctly estimate the influence of any one fluid at this stage. It is safe to infer that bowel digestion has hitherto attracted less attention than it merits, and that bowel dyspepsia is a more fruitful source of suffering than has been referred to it.

Much of what is commonly called "Biliousness" is simply indigestion at this stage.

Thus we close a hasty description of the machinery by which food is changed, so that it may be converted into blood, to subserve the demand of the several tissues.

I repeat the several *digestions*, or stages of digestion. The first, occurs in the mouth; the second, in the stomach; the third, is pancreatic digestion; the fourth, liver digestion; and the fifth, and most important, we call intestinal or bowel digestion. Dyspepsia may refer to one, more, or all of these stages; hence there are several kinds of dyspepsia.

§ 35. Colon, or Large Bowel.

The contents pass from the small into the larger bowel, and its return is prevented by a valve formed by a protrusion of the small intestine in the colon.*

The large bowel may be called a *reservoir*, and though it possesses great absorbing powers, it will not be profitable to dwell upon it as a digestive organ. It should be unloaded once in twenty-four

* Here may be settled the difference between Hydropathic and medical men as to the practical value of cathartics. The large bowel may be emptied by injection; not so the small. "Summer complaints" are frequently caused by the retention of indigestible substances in the folds of the small intestines. To cure we must remove the obstruction, which is easily effected by a simple cathartic, but wholly beyond the reach of an injection.

hours. This may be encouraged by the use of coarse bread or oat-meal, and fruits, especially figs and apples, as food, and, when necessary, we may properly resort to enemata of tepid water.



CHAPTER V.

Concerning Food.

§ 36. Classification of Food.



The following, in time, may be greatly and gladly improved; but, at present, the writer regards it as a practical statement of the most advanced views on the food question. As such it is offered to the kindly consideration of those who can profit by it, and for improvement by those who may hereafter serve the public better.

The common method of classifying food, into the nitrogenous and non-nitrogenous, is too general for practical purposes; to the chemist and physiologist these terms may convey distinct ideas; but to the general reader they express very little.

The following is not less scientific, and is easily applied.

First. Mineral matters for Brain and Bone,—these are not separable as yet by organic chemistry, and

we may group them together. Liebig denominates them Phosphates, because phosphorus is so frequently present; and because this element contradistinguishes largely the brain and bone from other solid substances of the body. Under this head we shall group the food most suitable for brain and bone building.

Second. A second class embraces elements forming the base of all solid tissues, but found chiefly in the muscular structure,—these are called Nitrogenous.

Third. This class may be called Carbonoids, or Carbonaceous, as they consist of articles which subserve purposes of combustion, and represent the heating or warming substances of the body. Alone they would support life but for a limited time. They constitute a very large per cent. of all food required, and are found very plentifully in meats and vegetables. According to Liebig, this class is heating and breathing food; and as such they must have an equivalent of mechanical power. They also serve through oxydation, to produce acid compounds needful in digestive juices and bile, also several acids found in perspiration.

Fourth. A class which contains little or no nutrition, but forms the waste of most articles of vegetable food, to which may be added the Gelatin of animal tissues.

These four classes are represented by the following, which is a modified table from Bellows.

TABLE I.

1st Class. PHOSPHATES.	2d Class. NITROGENOUS.	3d Class. CARBONOIDS.	4th Class. WASTE.
Active fishes.	Fishes.	Butter.	Green vegetables.
Wild goose.	Cheese.	Lard.	Berries.
Lean meats.	Lean meats.	Fats.	Fruits.
Oatmeal.	Beans.	Oils.	Gelatin.
Beans.	Peas.	Fine flour.	
Peas.	Oats.	Rice.	
Wheat.			

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A judicious diet would be composed about thus:

Of Phosphates from 2 to 4 parts.
Of Nitrogenous " 12 to 18 parts.
Of Carbonoids " 50 to 80 parts.

These are found mixed in both animal and vegetable food, and should be so eaten. By extracting starch, oils, and sugar, and using them in undue proportions, we sacrifice mind, health, and beauty. Mental stupidity and physical corpulency, also neuralgia, by underfeeding the nerves, are thus superinduced.

In our use of milk and wheat we continually invite disease by wasting the best of both.

§ 37. Table Commandments Wanted.

Every year of the past half century has contributed something to our general understanding of the food question. Formerly, hasty inferences from

facts, supposed or real, and a loose empiricism were the only guide. Later, the experiences of Conaro and Graham, and statements from Liebig, challenged thought and provoked experiments.

Banting astonished the world with the statement that the fatness or the leanness of a man depended on what he ate, or that he had starved himself into respectable human proportions by ceasing his gluttony. Moses told his people (Lev. xi. 9–12) to eat fish with fins and scales, and avoid those which had none; and an English king was severely judged, becaused he died from an overdose of Lamprey eels. To-day the eel and sturgeon, and almost all scaleless fishes are common articles of diet.

Since the great German chemist touched food with the fire of his genius the scientific world has been questioning and quarreling like overgrown children.

It were idle to attempt a succinct statement of how or why we have attained our present relation to the food question. The results are neither certain nor satisfactory. The common reader looks in vain for a set of *table commandments* that will regulate his body; and the student who seeks a settlement in the higher domain of scientific controversy, finds only dogmatic opinions, personal vanities, and a mass of facts, waiting for other facts, and somebody to arrange them all into a system which shall be practically applied to every-day life.

Dr. Davy says, "In no other class than that of fishers do we see larger families, handsomer women, or more robust and active men." Also, that fish-eaters as a class "are strong, healthy, and prolific." A medical teacher of some repute in New York city, declares fish fit food for fools, and denies its brain-nourishing properties. The poor doctor was taught such nonsense when a boy, and, like the Bourbons, he has limited capacity for learning anything new or forgetting anything old.

§ 38. Battle Among the Doctors.

Liebig, having determined that muscular tissue was formed mostly of nitrogen, said nitrogenous food is required to supply its waste. Also that muscular tissue would require greater repair with much use than little, and that, therefore, the nitrogen eliminated would hold a certain ratio to the use of the muscle. This simple, almost self-evident inference has been warmly contested. Because the excretions did not show waste of nitrogen, in due proportion to the exercise of muscle, Liebig was discredited.

Then the question arose whether the emunctory organs did not exhibit the elements of nitrogenous tissue in a changed form, as a partial product of their labor. Thence came the question as to said muscular tissue assuming a fatty degeneration. Liebig had argued, on chemical grounds, in favor of its occurrence

(see Pavy on Food, pp. 90–96). Virchow thinks it probable; Carpenter suggests a partial explanation. We may regard this at present as contested ground, with a more than probable chance that the end will prove a waste of muscular tissue proportioned to its exercise.

In the New York *Medical Journal* for June, 1871, is reported observations made by Dr. Austin Flint, Jr., during Weston's five days' walk, strongly corroborative of Liebig's views concerning muscular waste and muscular exercise. Time, patient observation, and experiments will make complete what is now fragmentary; and let us hope we are on the margin of discoveries which will, with certainty, state the law by which we can wisely regulate the diet, both with reference to the character and composition of the structure nourished, and the quality and quantity of the exercise involved.

§ 39. Does Fat or Phosphorus "Determine the Character of Mental Action?"

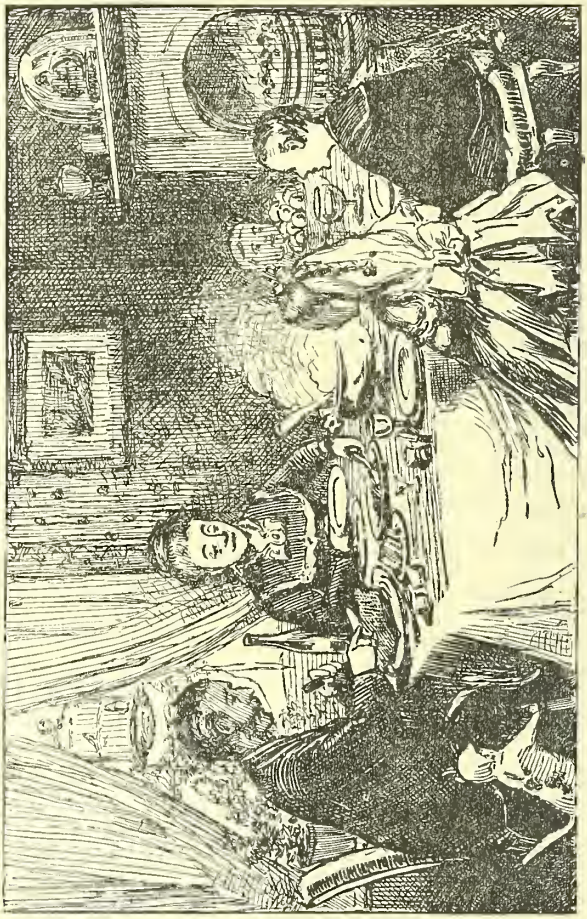
With a peculiar obstinacy, physiologists refuse to see more in food than the organic structure, with its nitrogenous base, and the fuel-fat which provides molecular combustion. That a certain kind of food is needful for strength, and another for temperature, they can see; but that another certain kind is equally required for manifestation of mind, is what

they habitually overlook, or silently ignore. There are not three books on dietetics within the English language, which would prescribe a different diet for Bacon, Stuart Mill, or Spencer, than they would for the commonest mediocre do-nothing in the land; the philosopher and fool require the same food. Practically, they see a man, and they prescribe nitrogenous food for strong tissues, and carbon to heat the body up and keep it going, that is all.

A common mind presents itself. It has the usual ego inheritance, which is common sense and an interrogation mark. It sees a steam engine, watches the whirl of wheels, sees the smoke, next the boiler, and, lastly, it sees the source of all, the furnace. Its curiosity and admiration extend back, from effect to cause, and end with the chunk of charcoal.

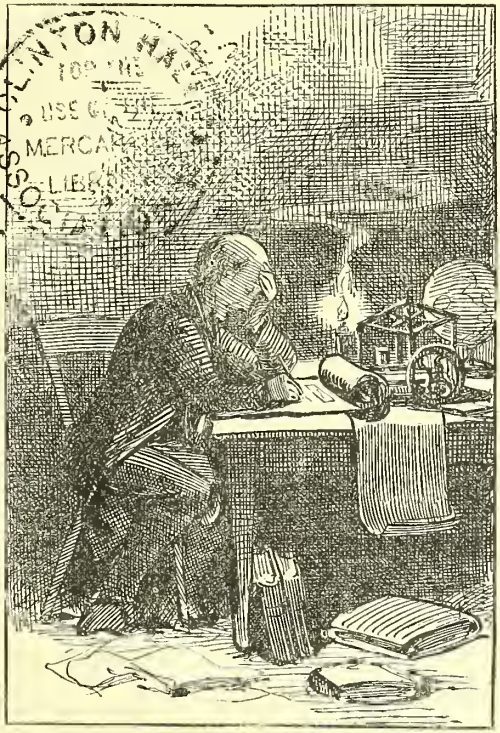
It sees another mill with its wonderful shuttles and grooves deftly clothing the race. Its million spindles spinning, and other frames weaving, the silks and satins which more than match everything, save the fair forms which wear them. Its cunning wheels with prancing, dizzy joy, praising the hand that made them. Back still further is the coarse, creaking, rumbling water-wheel, and a step farther is the pond of water. The admiration of this common mind focalizes over the hot furnace and the fish-pond. Its stupid senses see no further.

It cannot see the coining mind, which burnt the



A CHEERFUL MEAL. (See p. 38.)

candle low in the socket for half a lifetime, until, out of his wild dream, or sleepless night, was born the thought which formed the machine, that seemed kindled into life by a spark from the *All Forming*. It cannot see the divine part of that pale man which fetters the rolling river, and summons the coal beds to feed the being he has just created.



THE BRAIN-WORKER MUST HAVE PHOSPHATIC FOOD.

Not in fat or flesh, but in the sparkling phosphates lies "coiled the power" which turns the wheels of this world, and visits the stars of others.

It is not the wires or decomposed, coarse copper that carries thought across the continent.

It was not the winds that tossed Franklin's kite about, or the hand that held it; but the genius that

sat upon it as a crest, or surrounded it as a halo, that made the kite immortal.

In some ways the world works clumsily enough; but fat is not the best of man; nor is his thought made of it; nor does his soul live in it more than the genius does in the mill-pond. The clod builds the grain, the grain feeds the man, and the man talks with God; but the clod is not a companion of divinity. It is only a foot-stool. The fats keep the body warm, and generate molecular force; but they no more coin the thought than the clod sits in the counsels of heaven. If fats represented the genius of food, then would the scales determine the volume of thought, as they do the volume of beef. On the contrary, the stupidest, laziest, lowest, most useless and thoughtless of the human species are often the fattest.

You cannot live without fat any more than you can without water; but the man is more frequently smothered in the former than in the latter.

The history and lives of the Esquimaux are not alone written in three words, "*drowned in fat.*" The lean shoat has quickened senses, and limbs fleet as a steed, while his fat father good-naturedly grunts, and sleeps life away.

On the contrary, in swift birds and restless fleas, and the chit of grains whence the new life starts, and within the skulls of bright men, and not within

the skulls of fools, the phosphorus is found in large proportions.

Phosphorus for life and soul expression; fats for heat, fuel, grease, and good-nature.

§ 40. Something we Do Know relative to the Food Question.

Dr. Leidy gives the following as representing the chemical composition of the brain and spinal cord:

TABLE II.

Water	80
Albuminous matter	7
Fatty matters in association with phosphorus.	7
Osmazome	1
Phosphates of potassa, lime, and magnesia, chloride of sodium, and sulphur	5
	100

Chemical composition of the gray and white substance of the brain, by Lassaigne:

TABLE III.

	GRAY.	WHITE.
Water	85.2	73.0
Albuminous matter	7.5	9.9
Colorless fat	1.0	13.9
Red fat	3.7	0.9
Osmazome and lactates	1.4	1.0
Phosphates	1.2	1.3
	100.0	100.0

"The fatty constituents of the brain are remarkable, as two of them, being acid compounds, contain a large amount of phosphorus, amounting to about one-twentieth of the entire solid substance of the brain."—*Aitken's Practice*, vol. ii., p. 269.

"The fatty matters of the brain are found, according to Fremy, almost exclusively in the white substance, where mental action does not originate."—*Gray's Anatomy.*

"The spinal cord contains more albumen and more soft fat than the brain."—*Vagueline.*

Composition of spinal cord from L. Heritier:

TABLE IV.

Water	710.50
Albumen	73.00
Fat	82.50
Osmazome	115.00
Phosphorus	19.00
	1000.00

"The nerves contain more albumen and more soft fat than the brain."—*L. Heritier.*

"There can be no doubt that the most important part of the mechanism engaged in mental action is situated in the gray matter of the cerebral convolutions. Nerve cells (not fats or albumen) and *nerve fibres*, only, are the active agents."—*Beale.*

"In relation with the delicate living matter, situated near the surface of the gray matter of the convolutions of the brain, *which is alone concerned in mental action, I conceive that vital power attains its most exalted form.* It seems temporarily chained to this matter, through which alone it can make itself evident."—*Beale.*

"The brain of man constitutes only about one-fortieth of the weight of the body; yet it receives about one-fifth of the entire blood, or eight times the quantity given to other parts of equal weight."—*Carpenter.*

"The blood returns from the brain substance greatly altered in its chemical composition, especially as regards the loss of free oxygen, and its replacement by various oxycompounds of carbon, hydrogen, phosphorus, etc., etc., that have been formed by a process analogous to combustion."—*Carpenter.*

"The supply of blood to the cortical layer, gray matter, is *far larger in proportion* to the amount *of its substance* than it is in any other part of the body. Of the enormous amount of blood which goes to the brain, the white structure receives comparatively little."—*Carpenter's Mental Physiology*, p. 94.

Chemical composition of the brain from Draper:

TABLE V.

	INFANTS.	YOUTHS.	ADULTS.	AGED.	IDIOTS.
Water. . . .	827.90	742.60	725.10	738.50	709.30
Albumen . .	70.00	102.00	94.00	86.50	84.00
Fat	34.50	53.00	61.00	43.20	50.00 .
Osmazome .	59.00	85.90	101.90	121.80	148.20
Phosphorus .	8.00	16.50	18.00	10.00	8.50
	1000.00	1000.00	1000.00	1000.00	1000.00

Proportions of fat in different brains:

An adult of average intelligence, 1-4th of solid brain.
Idiot. . . . . 1-5th " "

Of the solid substance of the brain there is of phosphorus:

In adults. . . . . 1-15th part.
Idiots have less than. . . . . 1-30th "

INFERENCES.

First. If the brain depended upon its fats or albumen for its superior vital expression, its special function should be excelled by the spinal cord, and many other structures of the body.

Second. That if the presence or appropriation of fats determined the vital excellence of the brain, the white substance should be superior in that respect, as it contains more than five times the fat of the

gray matter. But to the latter substance all physiologists refer the most exalted vital action.

Third. If the vital action, conceded to the brain, depended upon the presence of albumen, then the white matter must be the superior seat of it; but the gray matter monopolizes both the blood and the superior vital action.

Fourth. As this exalted vital action cannot be referred to the fats, or the albumen, we *of necessity refer it to the phosphorus*, which contradistinguishes the brain substance from all other soft tissues of the body.

Fifth. Chemical analysis fully sustains this by showing that mental excellence is contradistinguished from idiocy, not by superior show of fat, albumen, or anything else except phosphorus. That while the yet unthinking child and the idiot have but eight to eight and a half parts of phosphorus, the average adult man possesses eighteen parts.

§ 41. Condition of Brain and Nerves Depends upon Food.

The brain cannot be fed without organized phosphorus. Like other tissues of the body, it is continually crumbling away, and must be rebuilt or lost. It has albumen, fat, and salts, as other parts of the body; but, unlike the rest, it and the bones abound in phosphorus. After severe mental labor the excretions show, by experiment, extra waste of phos-

phorus; while, in France, the chemists claim to tell quality and quantity of mind by the soluble phosphates which form so large a proportion of the brain. A reference to table five in the preceding paragraph, would seem to show that their pretensions are not entirely groundless.

By the said table it will be seen that the brain of infants, in whom thought is feeble at best, and of idiots, contains a small amount of phosphorus; while the age when life is most active and thought most vigorous, shows a corresponding increase.

The writer feels more friendly to the above conclusion, because there are few published facts bearing in an opposite direction. So far as evidence has been adduced, it is in favor of the above.

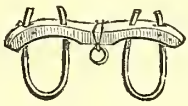
A prospective mother, by the selection of food which contains little or no phosphate of lime, may give birth to a child the bones of which are soft and pliable. This is because the blood from which the child's body was built contained but little of those elements which hardened the bones; with equal force, we think, the brain can be regenerated only by those elements in the blood which constitute its substance and its worth. Debility of brain and nerves, commonly called neuralgia, can generally be traced to a habit of eating that which contains but little phosphorus. One man makes a dinner of baked shad and Graham-bread, and he feels energetic and clear-

headed; another eats griddle-cakes, white bread, butter, and sirup, and feels stupid and lazy.

A school-boy who eats corn meal, rice, and molasses is in a poor condition for study. Observe the lady with pinched features, restless eyes, sleepless, cross, and nerves "pricking through." She has eaten heartily as to bulk, but the white bread, biscuit, cake, toast, butter, and strong tea contained no brain food. Literally her nerves have been starved. This will largely explain why nervous diseases are on the increase in America. To supply nerve and brain waste, phosphorus must be organized. Medical men were led into an erroneous practice, a few years ago, in the treatment of consumption. They observed, in this disease, the destructive assimilation showed extra phosphatic waste, and endeavored to restore it by phosphoric acid combined with a base. The remedy was inorganic, and their purpose failed. Brain and nerve food can only be found in animal and vegetable matter.



NEURALGIA.



CHAPTER VI.

Concerning Wheat, Oats, and Beans.

§ 42. Where Providence puts a Man, He plants Food for Him.



THIS rule has some exceptions, but is generally true. The tropics abound in vegetable productions which would meanly feed a Northern race. The seals are filled with fat, and adapted to a people who dwell in the shadow of perennial icebergs; while the same food would breed a pestilence near the Equator.

English wheat contains much starch; but the same grain grown beneath a warmer sun, and in a warmer soil, would contain less of the heating properties and more gluten. Because the atmosphere of England is cold and moist, the people require much blood-heating

food; and its soil contains the elements which provide it for the grain.

Men who never wear undergarments in New York are compelled to adopt them in London. In short, people who live in colder climates require, in their food, elements which heat the blood, or enable them to resist the cold without, and British wheat contains those properties; while the same grain, planted in South America, Italy, or many parts of Asia, would be rapidly changed into kernels containing less starch, and more of the nutrient properties of the grain.

This may be better understood by comparing Northern and Southern corn. The former contains most of the fattening properties, while Southern corn yields fourfold more nourishment for brain and bone, and nearly threefold more of muscle-food.

	PHOSPHATES.	NITROGENOUS.	CARBONOIDS.
Northern corn...	1	12	68
Southern corn...	4	34	40

Thus it will be seen that Southern corn is adapted to brain work, while Northern corn may be used to fatten stock, or put school-boys to sleep.

§ 43. Out of the Mist, or Drunkenness, Diet, and Doctors.

From the mongrel facts and almost universal jargon relative to the diet question, as it is popularly discussed, we derive little science and less comfort.

Self-constituted health-teachers have wrought with less prudence than zeal; abstract theories, empty experiences, and insipid dishes have been pushed to the front, and supported by an earnestness and arrogance only equaled by the self-denial and verdancy of the class which claims to have mastered the sum of nature's secrets relative to human appetites and indulgences. The multitudes speak from their stomachs alone. False appetites and gluttonous desires disqualify them for the witness or jury box.

The medical profession treat the diet question with a temerity, or indifference, almost inexcusable. The temperance question has taxed the ingenuity of legislatures, judges, and philanthropists, because alcohol robs this world of work and worth. Unwise table habits, gluttony, and other improper uses of food, are far more disastrous to human life and human growth than all forms of alcoholic indulgences combined. Yea, fourfold more. Most cases of scrofula, dyspepsia, and drunkenness may be traced to bad habits of eating. Irritating and innutritive articles put into the stomach are the chief source of false appetites, which lead to indulgences that end in drunkenness. Hence society has a claim upon the medical profession for a *philosophy of diet* which shall be as much a part of the youth's education as the multiplication-table. At present a dissertation on scientific feeding, by Huxley, would be

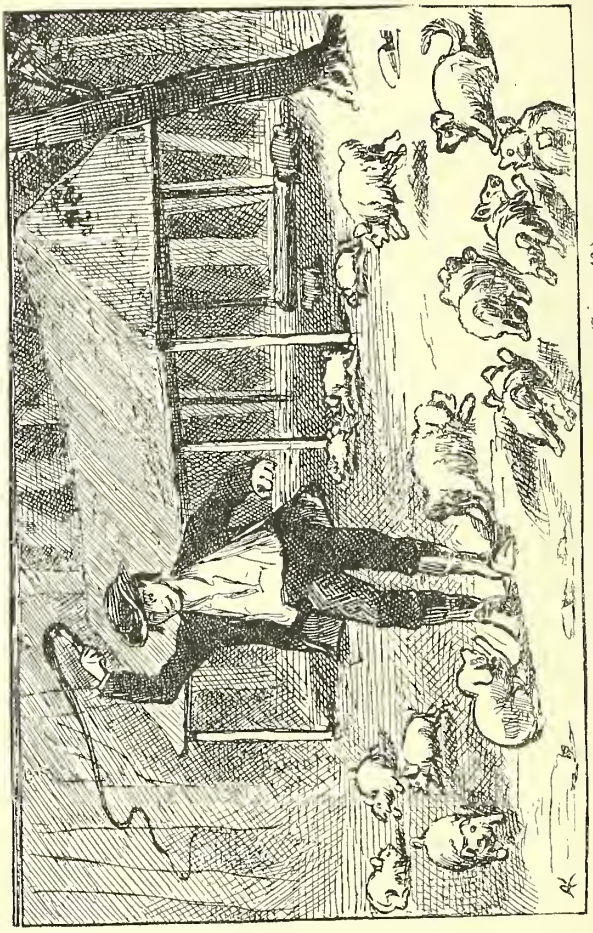
as novel and as interesting to the literary, commercial, and clerical classes in America as the discovery of a new planet, or the long-sought northern passage.

In the consideration of a subject so common, of which so much is said, and a definite knowledge of which is so difficult to obtain, it is but natural to expect a limited success. Nor is the task more agreeable, because each proposition must be contested with abnormal appetites,—the most impatient and tyrannical of human instincts.

Sufficient is known of the general question of food to deprive it of novelty. The facts involved are sometimes so vaguely stated as to render them unserviceable. To talk of *proteids*, *amyloids*, and minerals, found in fruits and flesh, and appropriated for the regeneration of human tissue, is true, and may be scientific; but it is so obscure a statement of facts most needed, that the mass profit as little in their rehearsal as they would in reading a poem in the original Greek.

§ 44. Wheat the King of "Corn."

Were man required to name one article of food best calculated to sustain life amid the varied labor, exposures, and zones of the earth, that one would be wheat. It is a species of grass older than the history of any civilization; and to-day it finds expres-



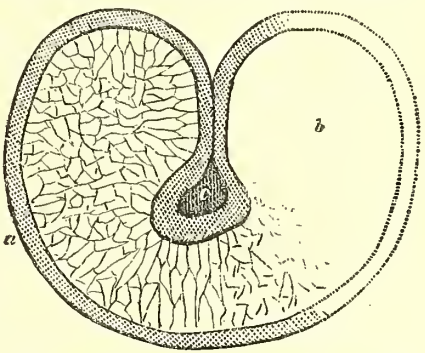
THE POODLE DOCTOR AND HIS PATIENTS. (See p. 46.)

sion in five hundred different varieties, and feeds more millions than any other named food.

Planted in colder soil, it develops properties adapted to the people who till it; while warm climates yield wheat containing less of the warming properties, and more of the nitrogenous, bone and brain forming constituents.

As the corn of the Southern States differs from that grown in the North, so the wheat of Turkey contains less of that which warms the blood, than the same grain would produce if perfected in Northern Europe.

Wheat may be called the monarch of all food, from the extent of its use, the varied life it is calculated to sustain; and, especially, because it contains all the elements of the human body in about the same proportion as they are there found.



TRANSVERSE SECTION OF A GRAIN OF WHEAT.
A. Bone, muscle, and brain; B. Heaters and Fat; C. For brain.

Were man given wheat alone as it comes from the field, he need only add the pure water to make his dietary complete. Thus he might live into gray locks, make laws, and rule nations, and, dying, leave behind him a strong and stainless life.

Of the seventeen organizable elements, it contains fourteen, and these unequally distributed in different parts of the grain. This drawing represents a transverse section of a grain of wheat. The outer rim and what lies next to it abound in the properties of muscle, bone, and teeth. These include the starch granules incased in cell-walls, where are placed the heat and fat producers; while, inclosed by them all, whence starts the new life of the seed grain, is securely placed the phosphorus which abounds in the brain and nerve of man.

These three essential elements are mixed, each contributing a little to the other; and still each having a home of its own, where we can always find it.

Liebig vehemently protested against his countrymen robbing the wheat of the rim and the chit, by the process of bolting the flour, especially as it deprived the bread of the phosphates for brain-nourishment. Still the white flour was preferred, and its ablest advocates contented themselves with answering the great German chemist thus: "Why complain? If we eat the starch and feed the balance of the grain to the swine, and then eat the swine, what can we lose?" So into the swill-barrel went the bran and shorts, and out of the pork-barrel came scrofulous meat, built in part of that which should have nourished mind, and taught men better than to

make a staple food of so unhealthy an animal as the hog.

The Yankee was the first to utilize Liebig's idea on the food question. He argued thus: "If the hog eats the brain food he should exhibit more mentality than is accredited to him; and to test this, I will see what education can do for him."

The result is well known. *The Educated Pig* was soon on exhibition, and beat the man at his own game of "poker."

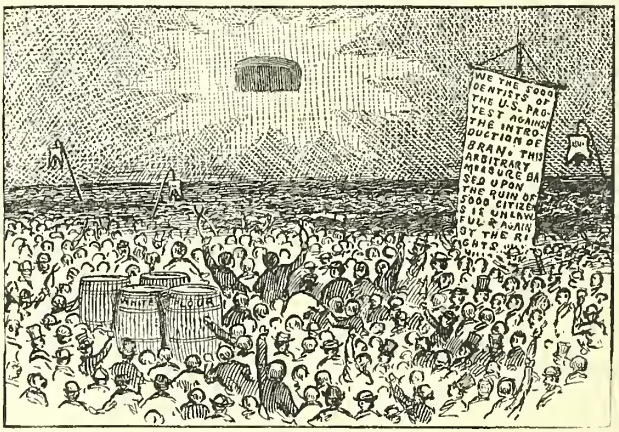
§ 45. Bolted or Unbolted Flour.

Bread to contain the elements of the body must represent the entire wheat. The bran abounds in glittering, pearly teeth, and long, strong bones; but where the flour is valued in proportion to its whiteness, the wheat is emasculated to produce that which commands the highest price. Thus the brain, bone, and muscle building qualities are extracted, and the starchy portion preserved. White flour, thus prepared, has been shown by actual experiment to be incapable of sustaining life for a long period; and it is not surprising that Liebig should contend against sacrificing the most valuable parts of the grain to a false pride, or falsely educated palate.

Americans are not less careless, or criminal, in this respect. Nursing mothers sacrifice the health of their children by an ill-chosen diet; and in our

toothless babes, the demand for soothing syrup, false teeth in so many girls not yet out of their "teens," and imperfect forms of our boys and girls, we see a strong reason why the "staff of life" should not be robbed of what, in a natural condition, contains all that is needed for perfect bodies.

The many preparations of white flour, by leaving



DENTISTS PROTEST AGAINST BROWN BREAD, BECAUSE ITS USE LESSENS THEIR RECEIPTS.

the system unfed, produce that debilitated condition which leaves it a prey to every disease or passing wind. To the different preparations of white flour, so liberally used, we charge imperfect nutrition, neuralgia, constipation, and a good proportion of children prematurely buried.

The American people have lived largely upon white bread, white biscuit, and an endless variety of

white crackers for forty years, and to-day they employ five thousand dentists at an expense of five million dollars each year; while not three women in one hundred have perfect teeth at the age of twenty-five. Establish a general use of *brown bread* in every family, so that the hull of the wheat enters into the composition of daily bread for two generations, and, three out of four of all dentists would be compelled to seek some other vocation as a means of support.

§ 46. **Analysis of Wheat.**—*Payen.*

TABLE VI.

Nitrogenous matter	14.45		Water	14.22
Carbohydrates	68.48		Nitrates or muscle-makers	14.45
Fatty matter	1.25	or	Carbonates, or heat and fat producers	69.73
Mineral matter	1.60		Phosphates, or food for brain, nerves, etc	1.6
Water	14.22			

This table represents all the elements of the human body in proportions required for heating, also for the nourishing of brain and muscle.

Under ordinary circumstances, a man requires of nitrogenous food one fifth the amount of carbonaceous needed for warming the body, and the phosphates should constitute from one and a half to three per cent. of the entire diet.

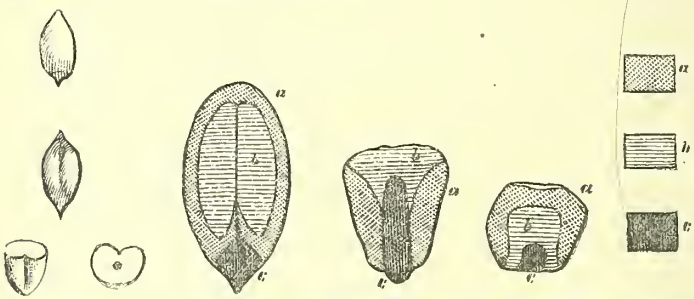
Dr. Dalton, quoted elsewhere, and the following tables are in full accord with this view:

TABLE VII.

DAILY REQUIREMENTS OF THE BODY.—*Letheby.*

	NITROGENOUS FOOD.	CARBONACEOUS FOOD.	CARBON.	NITROGEN.
	Oz.	Oz.	Gr.	Gr.
During idleness as determined by dietaries	2.67	19.61 =	3.816	180
During idleness as determined by excretions	2.78	21.60 =	4.199	187
Average	2.73	20.60 =	4.005	184
Routine work as determined by dietaries	4.56	29.24 =	5.688	307
Routine work as determined by excretions	4.39	23.63 =	4.694	296
Average	4.48	26.44 =	5.191	302

This will be better understood by a reference to the following drawings, which exhibit the three important principles in grains:



WHEAT. SOUTHERN CORN. NORTHERN CORN.

A. Nitrogenous, or muscle and bone food; B. Carbonoids, or heat and fat producers; C. Phosphates, or food for brain and nerves.

§ 47. Why the Bran Should Be Preserved.

The bran of wheat is composed mostly of an indigestible woody fibre, and constitutes from five to ten

per cent. of the whole grain. In it are found all the iron and silicate of the wheat. By a microscopic examination of the excrement of horses and cattle, the woody fibre of the bran is found undigested; but the silex and iron leave the bran in the process of digestion, and this, observes Dr. Bellows, may explain why horses always have sound teeth.

Pale, anemic girls crowd our streets. A rosy cheek is a rarity. The iron in wheat paints the glow, and the fresh, "pinky" complexion depends upon the same artist. Chlorosis, pale faces, and dental labor, hold an inverse ratio to the use of unbolted wheat flour and good brown bread.

Constipation is largely overcome by the use of bran in bread. It is a simple and efficacious agent to secure a soluble condition of the bowels. Its habitual use is superior to all the cathartic pills in America. When the bowels are irritable, and diarrhœa easily provoked, it is well to sift the bran from the wheat. The soluble properties of the bran render *Bran Tea* a grateful drink in summer complaints, and I have met people who had great faith in its curative powers, when thus employed.

§ 48. Practical Summary Concerning Food.

Briefly stated, the brain and other nervous structures are composed largely of phosphorus, soda, and potassa, readily soluble in water. These exist in

proportions of about two parts in one hundred, during middle life. *The muscles* contain mostly nitrogen in the proportion of sixteen to the hundred pounds, or sixteen per cent. *The bones* are rendered hard by phosphate of lime.

To form cushions, to give rotundity and symmetry of form, as well as to generate force and preserve the temperature of the body, a large proportion of the daily food is required.

Apply the thermometer to your arm-pit in January, and it will report about 98° F. In July it will tell you the same story. If the temperature be under 98°, we call it disease; if over 100°, it is disease; if much over 100°, it indicates something fearful.

Nature preserves the temperature of the human body much as we generate heat to render our homes comfortable.

In winter much fuel is consumed; in summer much less. This fuel is composed largely of carbon. In chemical composition, that which subserves purposes of combustion and preserves the temperature of the body is *similar* to what we burn in the furnace, the preponderating substance being carbon. To simplify what is needed for heating, and rotundity of the body, we will call them *Carbonoids*, by which we mean articles composed largely or altogether of fat, starch, and sugar.

To substances needful for repairing the waste of brain-structure, we shall apply Liebig's term *phosphates;* and we may safely follow the same author and call muscle-food *nitrogenous.* These terms will be used hereafter to designate brain, muscle, and warming food.

§ 49. Food in its Natural State.

The following tables have been carefully prepared, and will be a safe guide, for all practical purposes. The writer is aware to what extent exceptions may be taken to them; but he trusts the generous reader will not cavil on minor matters when the truths contained are so important. Until results in organic chemistry can be attained without preliminary incineration, they can only approximate perfection. At present it is clearly a duty to make the best of what we have, and wisely wait for the better thoughts coming.

ANALYSIS OF MAN.

Chemists exhibit the following result in the analysis of the human body. Of 100 parts,

Two per cent. of phosphorus for brain and nerve.

Sixteen per cent. of nitrogen for muscle.

Seventy per cent. of carbon for heat and fat.

Food should contain elements bearing a true ratio to the chemical constituents of the human body—

modified by the temperature of the weather and the character of the employment.

ANALYSIS OF FOOD.

Vegetables.

Table VIII.

	PHOSPHORUS, FOR BRAIN.	NITROGEN, FOR MUSCLE.	CARBON, FOR HEAT & FAT.	WASTE.	WATER.
Potatoes	1	1	16	8	74
Sweet potatoes.	3	2	22	6	67
Onions	½	½	5	0	94
Cabbage	½	1	6	½	92
Asparagus ...	½	½	5	0	94
Cucumbers...	½	0	2	4½	93

Fruits.

Table IX.

	PHOSPHORUS, FOR BRAIN.	NITROGEN, FOR MUSCLE.	CARBON, FOR HEAT & FAT.	WASTE.	WATER.
Apples	½	5	10	4	80
Pears	½	4	10	4	80
Currants	¼	1	7	10⅔	81
Cherries	½	1	21	7	70
Figs	2	6	58	16	18
Prunes	2	4	20	9	65

Miscellaneous.

Table X.

	PHOSPHORUS, FOR BRAIN.	NITROGEN, FOR MUSCLE.	CARBON, FOR HEAT & FAT.	WASTE.	WATER.
Human milk .	½	3	7	0	89½
Cow's milk . . .	1	5	8	0	86
Cream	0	3½	4½	0	92
Butter	0	0	100	0	00
Lard	0	0	100	0	00
Cheese	5	30	28	0	37
Yolk of eggs. .	2	17	30	0	51
White of eggs .	3	13	00	0	84
Chocolate	2	9	88	1	00
Clam	2	12	2	0	84

Meats.

Table XI.

	PHOSPHORUS, FOR BRAIN.	NITROGEN, FOR MUSCLE.	CARBON, FOR HEAT & FAT.	WASTE.	WATER.
Beef	2	19	14	0	65
Venison	3	20	8	0	69
Mutton	2	21	14	0	63
Chicken	3	21	2	0	74
Pigeon	3	23	2	0	72
Bacon	½	8½	62	0	29

Fishes.

Table XII.

	PHOSPHORUS, FOR BRAIN.	NITROGEN, FOR MUSCLE.	CARBON, FOR HEAT & FAT.	WASTE.	WATER.
Salmon	7	20	1	0	72
Smelt	6	17	1	0	76
Lobster	5	14	0	0	81
Herring.	5	18	4	0	73
Halibut	3	18	1	0	78
Eel.	4	17	4	0	75
Trout	4	17	1	0	78
Cod-fish	2	17	1	0	80
White fish . . .	3	16	10	0	71
Oysters	$\frac{1}{4}$	12	0	0	88

Cereals or Grains.

Table XIII.

	PHOSPHORUS, FOR BRAIN.	NITROGEN, FOR MUSCLE.	CARBON, FOR HEAT & FAT.	WASTE.	WATER.
Wheat.	2	15	67	4	12
Rye	2	13	73	2	10
Barley	4	12	52	18	14
Oats	3	17	51	16	13
Beans	4	24	40	17	15
Peas	3	26	41	16	14
Northern corn.	1	12	68	5	14
Southern corn.	4	34	40	10	12
Buckwheat. . .	$1\frac{1}{2}$	8	60	20	$10\frac{1}{2}$
Rice	$\frac{1}{2}$	$5\frac{1}{2}$	78	3	13

§ 50. Oatmeal or Scotch meal.

A witty Scotch divine was "bearded" by an Englishman on account of the diet of his countrymen.

"Yes," replied Chalmers, "Scotch men and English horses feed on oatmeal, and they are the strongest men and fleetest horses in the world."

Liebig placed oatmeal alongside the choicest English beef. The famous Professor Forbes tested the size and strength of his students for twenty years. "He found that, in height, breadth of chest and shoulders, and strength of arms and loins," the Belgians ranked lowest, next the French, then the English; but above them all were the Scotch and Scotch-Irish, who, as children, lived largely on oatmeal and milk. During the Peninsular War, the finest men who fought under Wellington were Highlandmen; and they for years preferred their kilt, oatmeal and bagpipes, to the whiskey rations of the common British soldier. These Scotchmen were the hardiest and healthiest of those who contended against Napoleon.

The Scotch use oatmeal as a staple food. They are a tall, hardy, healthful class, and in metaphysical ability and size of brain compare favorably with any other people on earth.

The memory of my boyhood is filled with pictures of beautiful Scotch girls who left their heather and hillsides to cross the Atlantic. Three thousand miles

in a slow sailing vessel, with a long journey on foot, did not increase the tidiness of their appearance; but I now think of them trudging along with a bag of oatmeal on one shoulder, and a little child on the other. Stopping by a stream they would mix the water and the meal, and drink it from the heel of their slippers. The product of our fashionable milliners and dressmakers would deride them; but for the clear skin, bright eyes, rosy cheeks, strong backs, and stout limbs of those pretty Scotch girls, she could afford to give ten years of her life, and then die a better woman.

§ 51. Cornmeal Compared with Oatmeal.

Two farmers, in the presence of the writer, were discoursing concerning food for horses. One claimed from a large experience, that the cornmeal was superior. The other as warmly favored his oatmeal side of the question.

TABLE XIV.

COMPOSITION OF DRIED OATS.—*Payen.*

Nitrogenous matter	14.39
Starch	60.59
Dextrin, etc.	9.25
Fatty matter	5.50
Cellulose	7.06
Mineral matter	3.25
	100.00

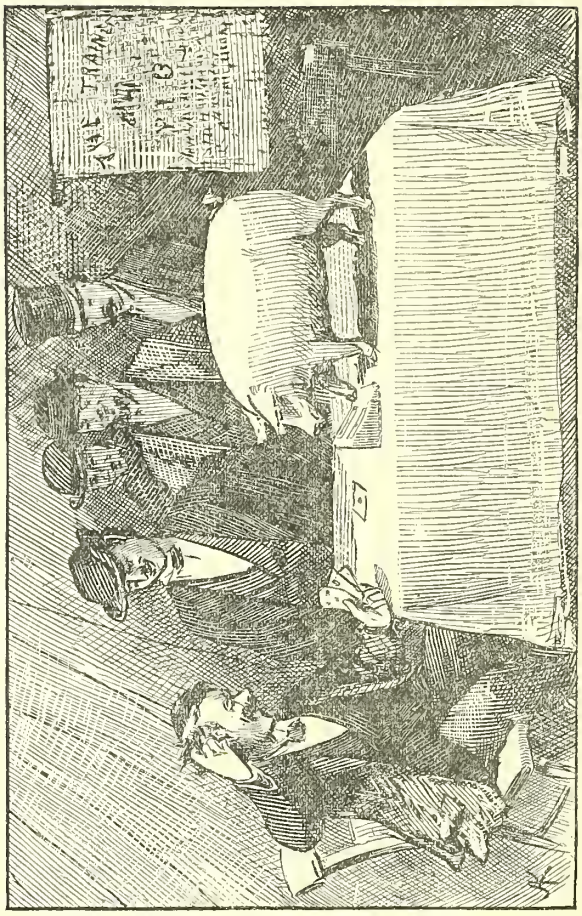
TABLE XV.

COMPOSITION OF DRIED CORN.—*Payen.*

Nitrogen	12.50
Starch	67.55
Dextrin, etc	4.00
Fatty matter	8.80
Cellulose	5.90
Mineral matter	1.25
	100.00

It is hardly a debatable question. The food for brain and nerves, for muscle and bone, contained in the oats, is greatly superior to that possessed by the corn, as a comparison of the tables will show. For strength and endurance two pounds of oats are about equal to three pounds of corn. For "nerve," ambition, energy, the oats are threefold superior. On the other hand, if it be to keep the horse in good condition during the winter, when little work is required of it, the corn is to be preferred. In other words, if you want your horse to be smooth, fat, and lazy, feed him corn; if you want for him life, speed, strength, feed him oats. If you want him to "*pull in the breeching*," feed him corn; if you want him to pull in the bits, feed him oats.

In childhood the oat is to be preferred to the cornmeal. The frame is shaped and proportioned during youth. That the seed determines the char-



THE YANKEE UTILIZING LIEBIG'S IDEA OF PHOSPHATES, BY EDUCATING A PIG TO PLAY POKER. (See p. 86.)

acter of the crop is true; but that the product may be greatly varied by the quality of the soil from which its nourishment is derived, is equally true.

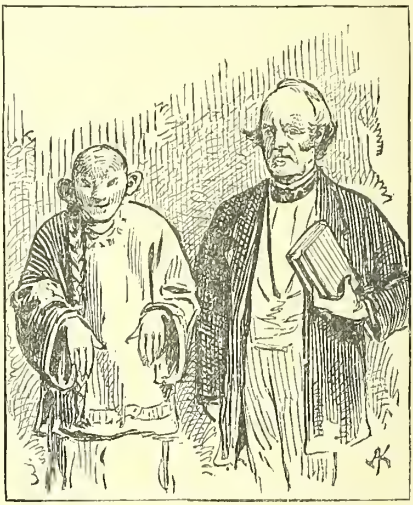
Nature has set limits to the frame of every boy; but these are seldom attained; and when children are raised on food which abounds in properties of bone and muscle, the height, breadth, and strength will surpass another child of equal natural gifts, but whose food contained material for frame in insufficient proportion. The men who were raised on white flour, cornmeal, rice, fats and sweets, will not only be less healthy, but will be diminutive in size compared with the boys who ate oatmeal, beans, peas, etc., up to their manhood.

§ 52. Beans vs. Rice.

The one belongs to the swamps of Florida and the plains of Asia; the other, to the barren hills of New England. The one is tropical, easy to raise, lazy, luxuriant, sleepy; the other is identified with a tall and hardy race. Rice is good for sleep, idleness, peacefulness, and a vegetative life. Heroes have little of it. It is not food for the gods, or for the best men. Beans build the long bones of Maine men, and are a source of much of the thrift, industry, and enterprise peculiar to Yankee character. Rice contains sufficient brain food to keep the one who

eats it awake—but little more than that. Beans are loaded with brain building material.

Rice gives warmth and fat and comfort. Beans bring restiveness, leanness, and disquietude. Rice requires one hour for digestion. Beans require three or four.



A NEW ENGLANDER FED ON BEANS, AND A CHINAMAN ON RICE.

The swiftest of Arabian horses employed in hunting ostriches, are fed almost exclusively on camel's milk and dried beans. The hardiest, strongest, and healthiest men in America are found among the Maine lumbermen, who live largely on beans.

TABLE XVI.

COMPOSITION OF RICE.—*Letheby.*

Nitrogenous matter	6.3
Carbo-hydrates	79.5
Fatty matter	0.7
Saline matter	0.5
Water	13.0
	100.0

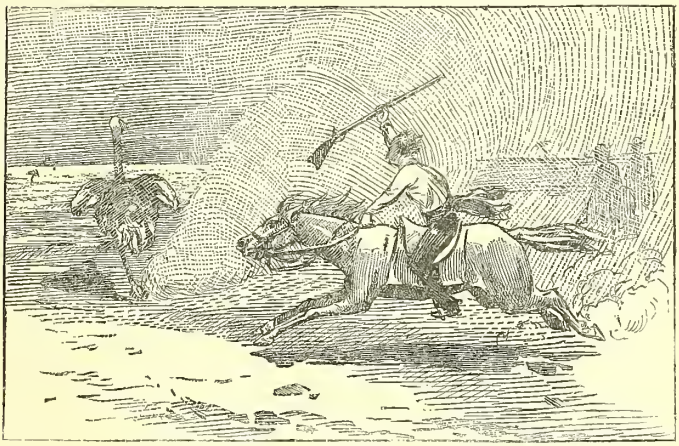
Compare this with the following table, which represents the

TABLE XVII.

COMPOSITION OF BEANS.—*Payen.*

	ENGLISH BEAN.	WINDSOR BEAN DRIED IN THE GREEN STATE.
Nitrogenous matter	30.8	29.05
Starch, etc.	48.3	55.85
Cellulose	3.0	1.05
Fatty matter	1.9	2.00
Saline matter	3.5	3.65
Water	12.5	8.40
	100.0	100.0

The carbo-hydrates and fat in rice are over eighty



ARABIAN OSTRICH HUNT WITH BEAN-FED HORSES.

per cent. of the entire grain—these are all heat-producing; while in beans these elements are deficient.

For brain and nerves one pound of beans equals eight pounds of rice.

As a muscle feeder one pound of beans equals five pounds of rice.

Because rice is easy of digestion, it is a good food for weak stomachs in convalescent conditions, but should not be used alone and continuously, as it so poorly feeds the nervous structure that neuralgia or other phase of nervous debility is sure to follow.

Beans lack Carbonoids, and require to be cooked with fat. In America the complement is pork; but this is ill-chosen, from the scrofulous condition of the swine, and because it increases the indigestability of beans—fat beef, butter, or cream, etc., are preferable.

One of the best cooks I know in New England considers fat beef preferable to pork, both from a sanitary consideration and because it imparts a better flavor to the beans.

§ 53. How long should Beans be Cooked?

If stewed, never less than six hours, and if baked, never less than twelve.

Thorough cooking improves the flavor, and so changes the woody fibre as to render them less irritating to the bowels.

The late General George H. Thomas stated to a friend of the writer, that to effectually reorganize the American army, it would be necessary to "teach

the boys how to cook beans, or do without them." He referred the chronic diarrhœa, which caused a greater number of deaths than all the battles fought during the war, to partly cooked beans and strong coffee. Others there were, but these were the chief.

Bad water, exhaustion from long marches, exposure, and many other causes, diminished the vitality; but the bowel irritant was found in half-cooked beans, that gave direction to the expression of the morbid condition.

A lady in Portland, Maine, of rare genius in presiding over a household, says, "she never allows beans on her table cooked less than eleven hours."

Soup is one of the best preparations of beans. Let the beans be soaked over night if you would save time; but in no case, whether the beans are baked or used for soup, should they be parboiled, or the first water poured off. The parts of meat or vegetable which nourish brain may be dissolved in cold water, and by pouring it off this valuable part is lost.

Beans are too hearty for invalids, and should be used in limited quantities by persons engaged in sedentary business. They are best adapted to active, out-door employment.



CHAPTER VII.

More about Food.

§ 54. Animal and Vegetable Diet Compared.



E may live upon either one comfortably, cheerfully, and enjoy excellent health.

Meats are more stimulating than grains, and they are more liable to excite the emotions.

A mother recently consulted the writer relative to her child. It was restless, fretful, peevish; a source of great discomfort to the mother, whose health was yielding to the tax imposed by the child's care. Finding the child to be a hearty eater, and wanted only meat, the mother was instructed to confine the child to three meals each day, at regular intervals, and of an exclusively vegetable and milk diet.

Two weeks afterwards the mother said, "My child

is changed. It is no trouble to care for him. His restless, feverishness, and temper seem all gone."

Meat-eating nations exhibit more passion, anger, and revenge, while the people who subsist upon vegetables are docile and avoid war.

In olden time, those whom God chose as *Prophets and Apostles*, through whom the sunlight of another world was sent in streams to earth, as a class, lived on fruits and grains. These seem to "thin the blood," and increase the sensitive capacity of the individual. The passional and impulsive nature, the pride, and temper are fostered by animal diet, while gentleness, quietness, and self-control may be encouraged by fruits and grains. Thus children may be fed into petulance or prayer. Not a thought or fancy but may be tempered and toned by the food used. If we ate more as Christ did, we could walk more with him.

§ 55. When "Holiness shall be as Common as Bells on the Horses."

Blondin educated a minor faculty until, suspended midway between heaven and earth, he won the gaze of an admiring world.

Multiply that by a million to compute the possibility of our natures—when all people are fed upon sparkling phosphates; when the law of diet is fully understood and obeyed; when every limb of the body and every faculty of the soul are educated to

their greatest perfection; when every other is educated as was that one faculty in Blondin, we shall approach what is now only a dream of an infinite perfection—when we are faithful to the whole question of physiology and its application, a new era shall have commenced.

We shall then be converted not alone by pulpit and prayer; but we shall "cast out devils" by healing disordered stomachs, and human nature will be represented by a being so much better than ourselves that his whole soul will be attuned to the angel's morning song, and "Holiness will be as common as bells on the horses."

§ 56. Animal Food.

The lean and fat combine all the elements of the human body, and in suitable proportions. The carbonaceous property of meat is composed entirely of fat; and in vegetables the heaters are derived from starch, sugar, and fats—ten grains of fat being equal to twenty-five grains of starch.

Meats contain about three times the water of wheat, and they are about equal in nutrition, the concentrated fats giving place to the extra water.

Lean meat possesses nitrogenous and phosphatic properties in about the same proportion as beans and peas. Its gelatine is carbonaceous, but capable of little or no digestion; though it gives consistence

to soups, and promotes regular action of the bowels.

When the muscle of meat is eaten, it should be combined with potatoes, white flour, or other articles that will supply its deficiency.

§ 57. Beef.

Beef, in America and Great Britain, heads the list of meats.

TABLE XVIII.

COMPOSITION OF LEAN BEEF.—*Letheby.*

Nitrogenous matter	19.3
Fat	3.6
Saline matter	5.1
Water	72.0
	100.0

TABLE XIX.

COMPOSITION OF FAT BEEF.—*Letheby.*

Nitrogenous matter	14.8
Fat	29.8
Saline matter	4.4
Water	51.0
	100.0

Beef skillfully prepared is easy of digestion, and possesses stimulating properties which facilitate mental labor.

§ 58. Mutton

differs but little from beef in qualities of nourishment, but is less in favor, on account of its flavor and lack of equal stimulating properties. It is more digestible than beef, and on that account is sometimes preferred.

Table XX.

Composition of Fat Mutton.—*Letheby.*

Nitrogenous matter	12.4
Fat	31.1
Saline matter	3.5
Water	53.0
	100.0

§ 59. Veal.

This is less nutritious and more difficult of digestion than beef or mutton. For strength and power of endurance, workingmen are not partial to veal.

Table XXI.

Composition of Veal.—*Letheby.*

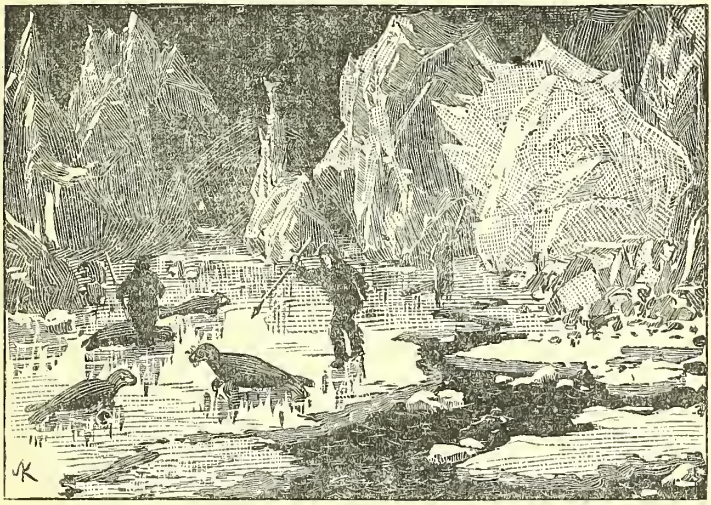
Nitrogenous matter	16.5
Fat	15.8
Saline matter	4.7
Water	63.0
	100.0

§ 60. Pork.

Among the laboring classes of Asia, Europe, and

America, pork is an almost universal article of diet. It contains less nourishment for brain and muscle than beef or mutton, and is much more difficult of digestion than either.

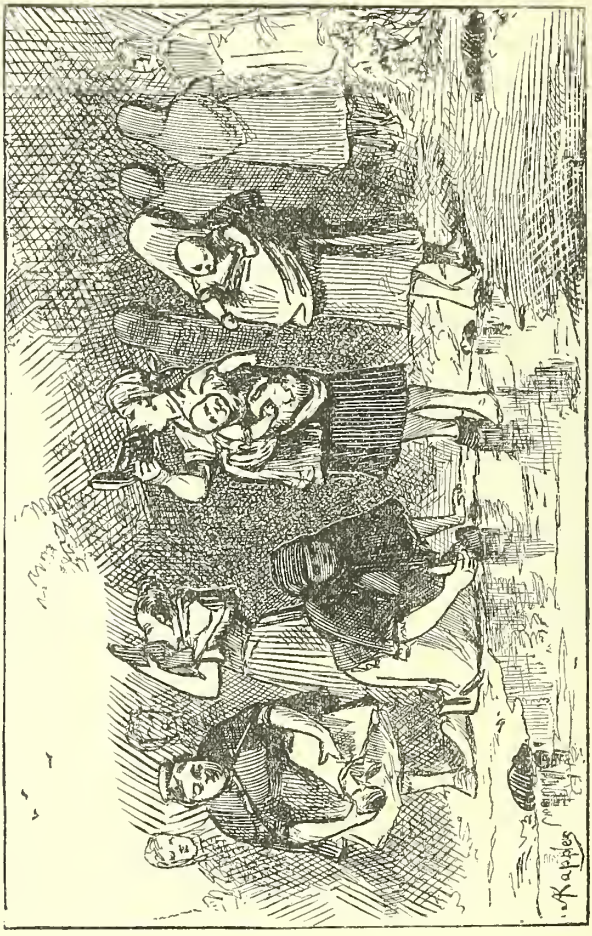
On account of its diseased condition the better educated classes of all countries use it less than for-



FISHING AMONG THE ICEBERGS FOR SEALS, WHICH FURNISH FAT REQUIRED IN AN EXTREMELY COLD CLIMATE.

merly. It is a prolific source of scrofula, "biliousness," and dyspepsia; and of late years has become more odious on account of the Trichina Spiralis, or pork parasite, which infests its flesh, and often proves fatal to the consumer.

Lard is a filthy grease, and unfit for cooking purposes.



SCOTCH IMMIGRANTS WESTWARD BOUND. (See p. 95.)

TABLE XXII.

COMPOSITION OF FAT PORK.—*Letheby.*

Nitrogenous matter	9.9
Fat	48.9
Saline matter	2.3
Water	39.9
	100.0

§ 61. Wild Game.

This occupies a first rank in the list of foods, both on account of its wholesomeness and nourishing properties. Venison, the wild pigeon, and the pheasant are probably not excelled by any other meat; and most wild game possesses a flavor which commends it to the epicure. All wild birds are safe food for those who prefer it; though, occasionally, a bird may be poisonous from having eaten poisonous berries.

The reader is referred to the general list of foods in table (see paragraph 49), for the relative value of some articles of game, as the space of this volume will not enable us to discuss this subject at greater length. Before leaving this topic, we might say, the muscles of wild animals are more solid, and contain less fat than are found among the domesticated, the result, doubtless, of their greater use.

§ 62. Fruits.

In botany, seed and fruit signify the same. Our

use of the term is more general, and applies to what is common table dessert, such as apples, grapes, berries, etc. Fruits consist of the seed and pericarp (derived from the Greek *peri* and *karpos*). The latter consists of epicarp, endocarp, and *mesocarp*, or intermediate substance between the seed and the skin or outer layer.

The sweetness of fruits depend upon their starch being converted into sugar; and the sourness of others by the amount of free acid they contain.

Fruits are specially adapted to the demands of the system in summer time, and are a proper substitute for the over amount of fat and starch required during cold weather. Their nutrient properties are very limited; but they counteract the effect of a concentrated diet of meats and salt fish.

Fruits are also valuable in cases of rheumatism and gout, when, by their salts, they change the character of the blood, as is evident from the urinary deposits following their use.

Fruits are heartily commended to "high livers," as their presence is less obnoxious than the same quantity of richer and more indigestible food. They are "blood coolers," and do not encourage fevers or inflammation.

Unripe fruit creates alimentary disturbance, from the amount of acids it contains, while over-ripe fruit

is liable to premature decomposition, and thus may derange the intestinal canal, or its functions.

The habit of preserving fruit in an equal weight of sugar is bad. They should be used as near their natural condition as practicable. Some kinds are more digestible when cooked.

§ 63. Figs for Constipation.

Figs grown in warm climates are rich and luscious, containing much that is nutritious, especially of saccharine matter—the best are Turkey figs, brought from Smyrna. In cases of habitual constipation two or three figs before breakfast, and with the last meal of the day, are generally productive of the best results. They are liable to derange the stomach and bowels if eaten too freely.

§ 64. Of Potatoes—With or Without Skins.

The potato is a prince among its fellow tubers and roots. It is a native of South America, brought thence to North America, and was carried to Europe during the sixteenth century, but not extensively cultivated in England until two hundred years thereafter. It became a favorite product in Ireland, where it formed a chief source of sustenance.

Dr. E. Smith says an Irishman will consume ten and a half pounds of potatoes daily, or three and a

half pounds at each meal. These, with buttermilk, gave to the Irish people an efficient and economical diet.

TABLE XXIII.

COMPOSITION OF THE POTATO.—*Letheby.*

Nitrogenous matter	2.1
Starch, etc.	18.8
Sugar	3.2
Fat	0.2
Saline matter	0.7
Water	75.0
	100.0

The casein of the buttermilk supplied the nitrogenous elements, so deficient in the potato as to render it, alone, an unsuitable diet. Potatoes supplement meat, fish, and all other articles rich in nitrogen; and they maintain their rank in the diet list not only because they are wholesome, but also because they do not fatigue the palate. Only the *mealy* potato is readily digested. In cooking, the starch granules absorb the juice, swell and separate the cell walls, when the pulp assumes a loose farinaceous mass. When the liquid is absorbed only in part, the cells do not separate, and the potato remains firm, watery, and indigestible.

Dr. Letheby says, "Potatoes are best cooked in their skins, for the waste is then only three per cent.,

or a half ounce to the pound, whereas, if they are peeled first, it is not less than fourteen per cent., or from two to three ounces to the pound."

§ 65. Turnips.

The turnip is inferior to the potato as an article of food. It is properly used with meats, or other concentrated articles; but without company is a feeble stomach companion.

TABLE XXIV.

COMPOSITION OF THE TURNIP.—*Letheby.*

Nitrogenous matter	1.2
Starch, etc	5.1
Sugar	2.1
Salts	0.6
Water	91.0
	100.0

Carrots and parsnips may be ranked with turnips, and are of similar dietetic value.

§ 66. Onions.

These belong to the lily tribe, but in this utilitarian age, they are nipped in the root before the blossom appears. Like the garlic and the leek, the onion contains a volatile, acrid oil, which is an irritant and excitant. The odor and flavor are more pungent in onions raised in colder climates; while

those of southern countries are milder, and therefore better when stewed or roasted.

The onion is chiefly valuable as a flavoring agent; and the taste of one will sometimes impart a keen relish to beans, which without it would have been unpalatable.

The chief objections to the use of onions are their lack of nutrition, and the offence they may give to others after you have eaten them.

§ 67. Lettuce.

This is an agreeable salad, and is most used after nature's long winter nap, when all greens are gratefully received by the system.

As a nutrient it is comparatively worthless, being somewhat like the sawdust which the farmer mixed with meal to feed his growing pigs, "it doesn't fat, but fills up."

The milk of the mature lettuce possesses sleep-producing properties, and may be regarded as a mild form of opium. From it is manufactured a medical agent called Lettuce opium.

§ 68. Aristocracy in Food.

Let the best rule. *Oats*, *wheat*, beans, beef, fruits, fish, and game. These are the nobility of the cook's kingdom. From them spring strength, grace, good manners, gentle blood. No kitchen is complete without them. No meal perfect and those absent.

Middle class. Potatoes, salt beef, salt fish, pork, sausages, onions, squashes, hash, fried potatoes, fried eggs, white bread, doughnuts, griddle-cakes.

Invalid corps. Pickles, salads, cake, strong tea and coffee, preserves, rich pastry.



CHAPTER VIII.

Condiments—Coffee and Tea.

§ 69. Condiments



ARE chiefly appetizers. Their use is mostly the result of habit. Those who never use them never want them. To crave them is not natural. Cloves, pepper, mustard, and "Halford Sauce" retard digestion and produce irritation in a stomach unaccustomed to their presence. But their use has become a universal custom, and they require more than a passing notice. A good dinner is more than chemical quality and quantity which represent the demands of the body. It must be comfortable, palatable, cheerful. The more innocent condiments and pleasant conversation hold a similar relation to a well-managed table. Granted, in the abstract, that we may bide our full time without them, that we may be just as strong, and free from disease; still, he who makes my food more inviting, or he who makes me laugh, helps me heavenward. We have already too many *straight-jacket reformers.* I mean those who are so intensely logical that they severely condemn the use of any food which does not form tissue

or furnish heat. The Health Reform has been greatly retarded by "hobby riders," who are sure to dignify their hobbies by the name of *principles.*

He who prefers his meat or bread without salt or other seasoning, has a right to use them thus; but he who insists that a moderate use of salt, butter, plain catsup, or weak tea, impairs digestion or destroys health, is blind to the facts of history, ignorant of practical experiments on the changes of food in the stomach, or too illogical to give wise or safe counsel on the philosophy of eating.

§ 70. Do Condiments do Harm?

Of course they do. What does not harm when abused? Much of dyspepsia, neuralgia, irritability, and sick headache is chargeable to the abuse of condiments.

The writer was once accosted by his hostess at table, thus:

Hostess. "Doctor, what will you have?"

Doctor. "An appetite, madam."

The good woman placed before me a dish of *horse-radish.* A teaspoonful would have brought me an appetite; and if I had used it, the first rule of healthy eating would have been violated. It is, NEVER EAT UNLESS HUNGRY.

§ 71. How not to Abuse Condiments.

Condiments may be used to season or flavor diet

proper, when the article employed is so innocent in quality or limited in quantity, as not to irritate the mucous surface over which it passes, or otherwise interfere with the structure or vital action of the system. Therefore a limited use of salt, vinegar, or aught else, which yields only pleasure to the sense of taste, is harmless, or even beneficial. In this category do properly come lemon, caraway, cinnamon, salt, etc., etc.

§ 72. Pickles

have been subjected to wholesale condemnation by those most actively engaged in health reform. As an appetizer they usually do injury; because the gratification of hunger secured by their agency does more harm than good.

The cucumber, cauliflower, or onion pickles, are indigestible, and irritable to the stomach and bowels; and they possess no nutrient properties worth mentioning.

Peaches, apples, and beets, when pickled, are less objectionable; but even these are preferable without the pickling process.

§ 73. Pepper, Cucumber Pickles, etc.

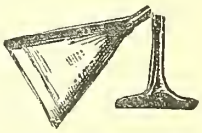
While it is proper to use inoffensive spices to render food more palatable, it should never be forgotten that pepper, cloves, pepper-sauce, capsicum, cucumber pickles, chow-chow, and all the more pun-

gent condiments are, in any considerable quantities, totally incompatible with a healthy taste or natural appetite. Topers, gluttons, and dyspeptics seldom fail to patronize them; and their use begets those diseased cravings which often extend to the use of alcohol and habitual drunkenness.

As nature seasons the apple, the peach or the strawberry, you may season your food; but it is not well or wise to encourage the use of spices, which inflame the stomach and establish disease.

§ 74. Wine in Pudding Sauce?

No. The woman who flavors her sauce or pies with alcohol, whether it appears as wine or brandy, is careless, ignorant or corrupt. Many a man has his alcoholic diathesis fanned to fury, by having pampered his false love for pungent flavors.



WOMEN MUST BREAK THE WINE-CUP.

Mrs. Stowe's bravest character in "My wife and I," should be a warning to all right-minded hostesses.

A conscience that does not consider the possible consequence of a wine-flavored pudding sauce served to husband, sons or friends, is unsound if not criminal.

§ 75. Where Woman's Wit Goes.

It is sharp; it may bring tears. You will find it in the pickle-bottle. Woman is not proud of her

bread (honestly, she ought not to be); she boasts not of her roast or her steak; but she has paid two dollars for a French cook-book, from which to learn how to feed the first six inches of her husband's alimentary canal. To feed his brain, his heart, legs, and arms, she never thinks of—but, to "have it *taste good!*" that's the aim. To get that into his mouth which would make him crazy, if put into his eye; to get into his stomach that which would blister his hand if applied to it; then, to make him "smack his lips" and call it good, that is the climax!—unless, indeed, it occurs later, when he has progressed from the pickle-bottle to the wine-bottle, and then goes home to "raise the Old Boy." Many a drunkard is made such from overspiced food.

§ 76. Sick Headache and Spices and Fifty Dollars.

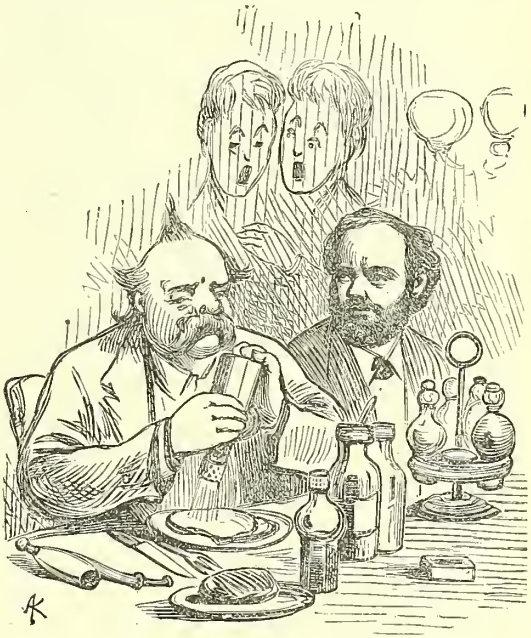
"Doctor, I will give you fifty dollars to cure my sick headache," said a robust German, at a "*Table de Hôte.*"

Doctor. "I will cure you, and effectually, if you will allow me to direct your eating as well as prescribe your medicine."

German. "No, doctor, I tinks my stomach knows better what is good for me, as any physician does.

Doctor. "Well, my man, you should let your stomach be your physician, if it knows more than the doctor."

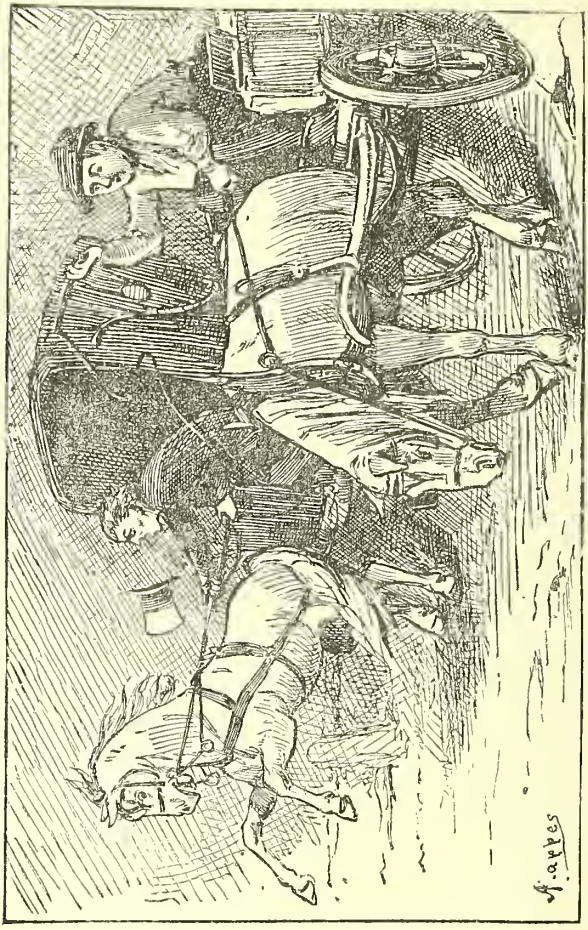
A few minutes later his steak appeared covered with onions, and fragrant with the odor of pepper. He took five articles from the cruet-stand and coated one side of the meat, then turned it over and coated the other side similarly. As he cut this compound in small pieces, his eyes become lustrous, and his face beamed with pleasant anticipation, reminding one of Byron, who knew the devil was in a similar dish, but was satisfied to go to tophet, for the privilege of eating it.



"MY STOMACH KNOWS BETTER WHAT IS GOOD FOR ME AS ANY DOCTOR DOES."

The doctor might have said to this man, "Now, good fellow, cut that meat through the centre and put one half on your back, and if it don't *draw a blister* I will give you fifty dollars."

To what extremes are people led! One man re-



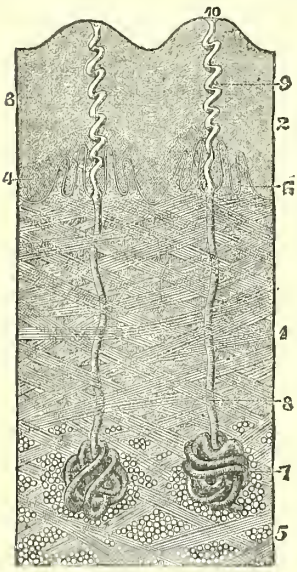
COMPARATIVE RESULTS FROM FEEDING HORSES OATS OR CORN. (See page 96).

fuses a grain of common salt on his meat, or to render his vegetables more palatable, because salt is "inorganic, and therefore cannot be converted into tissue," though this same salt forms a part of the blood. The other insists on applying to the stomach, that which, if repeated on the outer skin, would convert it into something resembling rawhide. In structure, the lining membrane of the stomach is similar to the outer skin, only more sensitive. Thus irritated, the stomach becomes the seat of abnormal desire and false appetites. From it come strange voices through the night in "dreams" and "visions." People never have "*Nightmare*" who allow their stomachs to rest while they themselves sleep.

§ 77. Coffee, its Charms and Dangers.

It is the nectar of the nineteenth century. Not better was given to the old heathen gods. Schiller wrote under its influence, and died middle-aged. Beethoven drank coffee daily, and was deaf at forty. Goethe despised it, and lived beyond eighty. It seduces millions by its pleasant intoxication. Doctors hardly reason about it. They drink it, and under its influence they talk about it as an old friend; and then they advise other people to drink it because they do. Say they, "'It makes the soldier brave, gives rest to the weary,' 'strength to the weak,' 'thoughts to the dull brain,' 'makes sleepy

people wakeful,' and 'wakeful people sleepy.' Lastly, it is not food, but it takes the place of food, and therefore should be used." The actual amount of nutriment contained in three cups of coffee, as prepared, is too trifling to speak of; but, we are told, by its use we can *prevent the normal waste of tissue*, can prevent "*retrograde metamorphosis of tissue.*" So much the worse. Waste is as natural as repair. The digestive organs are means through which blood is elaborated for the formation of tissue. This tissue lives its time and dies, after which it is carried off by means of emunctory organs—by the skin, kidneys, etc. A free use of coffee is followed by feeble emunctation; thus the kidneys yield less urea, which is a product of the death of nerve tissue; the skin acts less efficiently; the body wastes more slowly. Then the wise remark is made, "its *use may be continued indefinitely with advantage.*" This is a coffee course of reasoning—*something is kept back.* The average amount of urea eliminated



SECTION OF SKIN FROM FOREFINGER.

1. Dermis; 2. Epidermis; 3. Cuticle; 4. Soft layer; 5. Adipose and other tissue under skin; 6. Tactile papillæ; 7. Sweat glands; 8. Duct; 9. Spiral passage of the latter; 10. Opening of the sweat glands.

in twenty-four hours, is about five hundred grains. This is natural, therefore healthy. Many miles of tubing enter into the composition of the sweat glands, through which a large proportion of the product of destructive assimilation finds egress. This also is necessary to health. Practically, coffee by its effect on the nervous system defeats a natural and physiological process of blood purification,—therefore cannot be regarded as a health agent.

That the human constitution may become used to coffee, and even demand its continued use, as it does to alcohol, tobacco, and opium, needs no argument to prove. But instead of recommending its frequent use, it were wiser to say, coffee is not properly a food, and should not be sought to nourish and form tissue; but it may be used in great moderation, and add much to the enjoyment of life. It will bridge over moments of despondency, cast gleams of light into dark places, and give cheer to a social hour. Like a little song or a loving friend, not *necessary* to your *existence;* but if you intelligently use them, they are means of growth and grace.

A misuse of coffee produces "biliousness," nervousness, despondency, headache, neuralgia, dyspepsia, etc.; invalids should avoid it altogether. Persons of a highly susceptible organization should use it seldom, and never strong, or before retiring. Its common use in America is greatly to be regretted.

As a rule, the conscience and common sense of the old coffee-drinker is so adulterated by his favorite beverage that he refuses to see clearly, or reason correctly with himself. Bulwer was not far wrong when he made "habit *ten times stronger than nature.*"

Parents commit a crime against their children when they allow them to use coffee.

TABLE XXV.

COMPOSITION OF COFFEE—100 PARTS.

Caffein	0.8
Casein	13.0
Gum and sugar	55.5
Fat and oil (volatile)	13.0
Mineral matter	6.7
Caffei-tannic and caffeic-acids	5.0
Woody fibre	34.0
Water	12.0

Chemical elements of caffein are identical with that of theine:

$$C_8\ H_5\ O_2\ N_2.$$

The "*coffee complexion*" is too well known to require comment.

§ 78. All about Tea.

Health reformers, generally, join in its abuse. Strong tea, sharp noses, and "shattered nerves" have

been huddled together. A physician came to its relief recently, by showing that it contained four per cent. nitrogen, and, therefore, nourished the invalid; but poor tea suffered worse for having found a friend.

TABLE XXVI.

CHEMICAL COMPOSITION OF TEA.

Theine	2 to 3
Casein	15
Gum	18
Sugar	3
Tannin	25
Volatile	¾
Fat	4
Fibre	20
Mineral	5
Water	about 6
	100

Chemically, caffein and theine are identical.

$$C_8\ H_5\ O_2\ N_2.$$

As a nutrient it is comparatively worthless. It seems an infliction to give a patient a pound of tea and a hogshead of water for nourishing properties that can be had in a small beefsteak.

Stimulating, warm drinks are common among all civilized races. Of these, tea is the most used, and, all things considered, probably the most harmless.

Its total abandonment is unlooked for, and, if practicable, would probably be unwise.

Used in moderation, it is a pleasant, harmless stimulant, not necessary to life, but a source of comfort. It exhilarates, comforts, and takes the fringe off those moments when called to "pass under the rod." As a warm drink it encourages capillary circulation; and when you use it you will be less liable to use what is worse. It should be taken in moderation, and *never* at night.

You ask, "Does it not destroy the nerve tone, produce dyspepsia, neuralgia," etc.? *Strong tea* does this, and more, often producing insanity; so you may poison yourself with potatoes, if you take a sufficient quantity. In advanced life, one cup of *weak tea* at a meal may be used without ill-health or impropriety. Among children, when habits are forming, and the nervous system impressible, its use should be universally discouraged. For them "Cambric tea" is as palatable and more healthy.

Strong tea in excess produces nervousness, irritability, despondency, dyspepsia, neuralgia, and insanity. Hence the rule should be, *weak tea or total abstinence.*

§ 79. Chocolate

is made from seeds of the Cocoa-tree, roasted, deprived of husk, sweetened, flavored, and ground. This boiled in milk forms a pleasant warm drink,

but the Theobromine is less stimulating than Theine or Caffein, and it will probably never become a general substitute for tea or coffee. This is the more to be regretted, as the ill-effects following its use are slight compared with that of tea or coffee.

§ 80. Cocoa

is an agreeable drink made from ground cocoa-seeds mixed with starchy matter; its flavor is more delicate than that of chocolate, and it is less frequently adulterated.



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CHAPTER IX.

Scientific use of Physiology at Table.

§ 81. Who Eats Correctly must Think Correctly.



SCIENCE for eating was not evolved until teachers and students forgot their stomachs and wine-casks, and began to inquire into the composition of the several tissues of the body.

When they learned that the yolk and white of an egg contained not the elements which formed the skeleton of the chick, they sought and found this reply,—The yolk contains phosphorus which becomes oxydized, by which an agent is formed that successfully attacks the lime in the egg shell: thus is found the needed phosphate of lime to harden the bones of the chicken.

Similar questions and answers must tell us what the brain is, and how to feed it. How muscle and bones are composed, and where the material may be

obtained. Beyond this the question must go. Not only what is the composition of the brain, and what will build it, but, when the mind is particularly taxed, what is the character of the waste, and what kind of food is needed to repair this waste? What constitutes a muscle; and in muscular exercise what tissue is specially wasted, and how repaired? If phosphate of lime hardens bones, how shall we feed our children to secure for them towering and strong skeletons?

Not here can we stop our inquiries. We must show the composition of each article of diet,—its nutritious capacity, its digestibility; how it can be best cooked, and when it should be eaten. All this is but the beginning of a science which includes food, body, brain, thought, emotion, disposition, hope, patience, petulance, prayer, and a long list of other things, upon which must hang the life, temperance, purity, and progress of the race.

§ 82. Summer Food in Winter is Bad; Winter Food in Summer is Worse.

We must consider not alone the elements which compose the human body, or the preceding divisions of tissue or structure, but also the season of the year, the occupation, the time employed, etc.

The teacher, thinker or inventor, by mental labor would waste largely of those elements which compose the brain and nervous structure. To supply

this waste the food employed should contain largely, in an organized condition, phosphorus, soda, and potassa.

On the other hand, where the muscular structure was mostly employed, the food should contain nitrogenous material in over proportions.

During winter, with the mercury at zero, the human system requires an abundance of the fats and sugars, from which heat is generated to resist the cold without; while in warm, summer months, these carbonoids would be a prolific source of disease.



THE VICTIM OF A SUPER-CARBONACEOUS DIET IN HOT WEATHER.

During these seasons nature wisely provides fruits and berries in abundance, which generate little heat, and are, therefore, poor friends to "biliousness," fevers, and inflammations.

Our great fat friend, who subsists on rich meats and gravies, buckwheat cakes and molasses, butter and cream, the year round, finds himself inconveniently warm during the "dog days."

On the other hand, his neighbor, who abstains from all animal food, and feeds mostly on fruits and vege-

tables, labors under a serious disadvantage during the winter months; as food deficient in starch, sugar and fat, fails to provide the warmth within the body which enables it to resist cold without. Thus we find a class who appear bloodless, and shiver with the first fall wind, from the continued use of a diet deficient in carbonaceous properties.



ONE WHO DENIES HIMSELF HEATING FOOD MUST SUFFER IN COLD WEATHER.

§ 83. Food for One Day.

Dr. Dalton says, "From experiments performed while living on an exclusive diet of bread, meat, fish and butter, with coffee and water for drink, we have found the entire quantity of food required during twenty-four hours, by a man in full health, and taking free exercise in open air, is as follows:

TABLE XXVII.

Meat	16 ounces.
Bread	19 "
Butter or fat	3½ "
Water	52 fluid ounces.

"That is to say, rather less than two and a half pounds of solid food, and over three pints of water."

Experiments upon prisoners in Scotch prisons show that men may be sustained for an indefinite time upon less than one and a quarter pounds of solid food per day, with water added. In the latter case the men were inactive; and the waste was consequently less.

In the above table the food used is concentrated. To secure nutrition from vegetables it would require a larger bulk to provide the same muscle, fattening or brain food. Where berries, apples, and similar fruits constituted a fair proportion of the diet, the bulk would require to be increased.

A reference to the food tables in this book will enable the reader to understand the increase or decrease in quantity, according to quality of food chosen. The same man, engaged in out-door physical exercise, requires a third more food than he would confined to an office, or other sedentary employment.

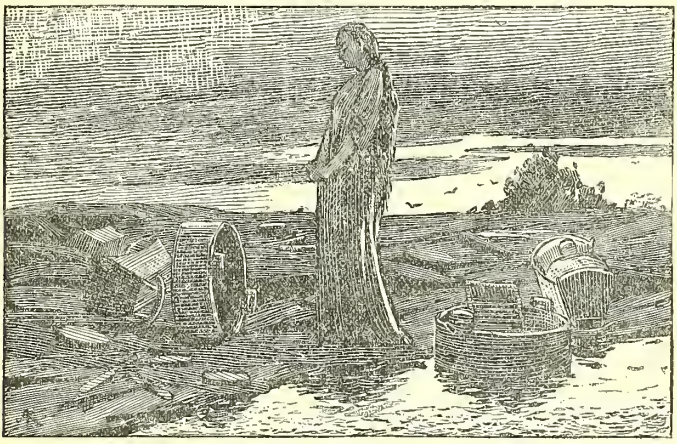
§ 84. How Often shall we Eat?

Of this, experience teaches everything and nothing. One, two, three or many meals a day are taught by names equally respectable.

A notable Health teacher said, once per day; and he practiced it. In one year he gluttonized himself into dyspepsia, when he exhibited his better sense by abandoning his theory and practice.

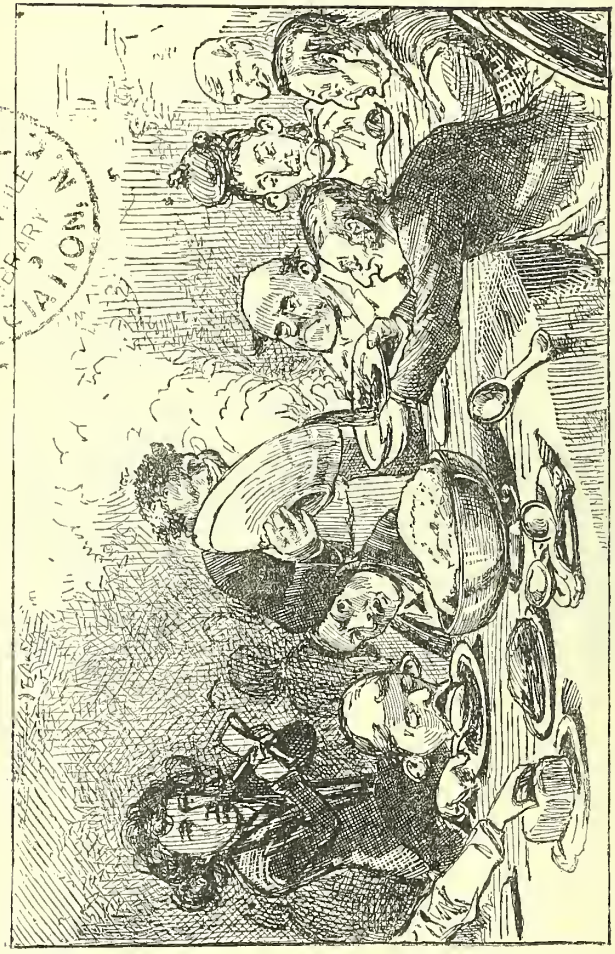
Others, with better judgment, advanced the *two*

meal system. In its favor may be said *it lessens woman's labor.* Do you wonder her many friends are slow to oppose it? Our poor mothers, wives and sisters, toiling through a long, struggling day, filled with a dead routine of domestic drudgery! What is a sadder sight than a silent, suffering woman, bowed down with a back-load of trifles all her life? No literary, clerical, political, financial



THE AVERAGE WOMAN'S PROSPECTS AND PROPERTY.

or mechanical prospect; no swift rivers or snowy mountain peaks, or sweet-toned branches or dewy meads! Only a low sandy desert, with scattered knives and forks, washtubs and cradles! What a toilsome treadmill is the life of more than three-fourths the women of the world! If to drop a meal from the day gives her an hour's rest or sunshine, do you object? Of course, these things should not



"ABNER'S WATER CURE" IN THE "VALLEY OF JEHOSHAPHAT," WHERE OUR ARTIST WENT TO INSPECT THE DIETETIC HABITS OF DYSPEPTICS.

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be so; but *they are*, still there are objections to the two-meal plan.

First. GLUTTONY.—Its advocates are the most systematic gormandizers I have ever known. In the *Water Cures*, where invalids congregate to improve their conditions by simple habits, plain living, baths, and alternating exercise with rest, the two meal system very generally prevails. The quantity of food consumed each day by these pale, sickly people will average considerably more than the same number of Maine lumbermen would allow for daily rations.

Second. IRREGULARITY.—Your meals are at hours different from those society has named; so that giving or receiving invitations to dine or sup with friends involves a violation of the habits of either one or both parties to the entertainment, those who invite or are invited, and the law of regularity is set aside.

Third. THE HAPPIEST HOUR IS SACRIFICED by omitting the old-fashioned "*supper meal.*" When the day's work is done, the head emptied of business, hopes buoyant, heart full; when the one desire of making the others happy actuates each member of the circle—this evening meal is the benediction of the day.

Life is so full of friction and care that we cannot afford to dispense with an hour so free from all that disturbs and chafes.

Spare the old-fashioned "supper table!" On it place food and flowers, alternately; and make these more acceptable by the sunshine of your hearts and imperturbable good-nature. Do not argue. Do not scold. See that your abundant humor hurts no one. Sanctify the occasion by feeling and giving your best.

§ 85. Better than Two or Three Meals.

A proper quantity and quality of food eaten at hours so the stomach shall have periods of labor and of rest.

About four hours are required to digest an ordinary meal. Breakfast at seven o'clock, will be digested at eleven. Now give your stomach an hour's rest. Dinner at one—from five to six o'clock the stomach rests,—a light supper, soon digested, at nine or ten o'clock you seek your couch and sleep sweetly, while your stomach rests and is prepared to dispose of a hearty breakfast. That is a syllabus of a daily Christian's diet.

§ 86. Irregular Eating.

You slept without ventilation, and this morning your appetite was feeble,—a light breakfast, pieces during the forenoon, dinner with a "coming appetite," a lunch during the afternoon, a light supper, with something to satisfy an "all gone" sensation before we retire. Think of it! By introducing even a nut or an apple into your stomach during the

forenoon you arrested or prolonged digestion. The stomach having worked until dinner hour, was burdened by an afternoon lunch, and had not a moment's rest until bed-time, when you refilled it, and compelled it to toil through the long night, only to repeat the direful dose to-morrow.

Is it any wonder you dream of ghosts and hobgoblins? or contend with "nightmares?"

§ 87. One hundred and nineteen Pounds of Smoked "Yankee."

A lean specimen of the "stub and twist" Yankee several years ago accosted the writer, thus:

"Doctor, I don't believe in your rules for eating, or causes for dyspepsia. I weigh one hundred and nineteen pounds, and have kept hotel for seventeen years. I eat three regular meals, apples, nuts, or crackers between meals every day, and before I retire I take a hearty lunch of beans, pie, or aught else. I always sleep well; and when I am awake and not eating, I chew tobacco, and always swallow the saliva." He told me this at forty. Four years afterwards his health failed him—his weight was reduced nearly twenty pounds. A more miserable man I have never met. Unfit for business, proud, yet incapable of supporting his family in their former position, despondent in the last degree, and every hour of the day filled with suffering. It seemed as though this little smoked specimen was

first employed to show what a human frame might endure, and, second, to teach how much one might suffer and still live.

"The mill of God grinds slow,
But oh, how fine!"

§ 88. Feeding Children between Meals.

Mothers feed their children into disease from which come inharmonious characters and wasted frames.

She who feasts her child between meals and educates the stomach into dyspepsia is, in the sight of heaven, committing a crime. It is a poor excuse that in her fond foolishness she covers her error with the idea that she "cannot bear to hear him cry." There is more charity in saving your child from suffering than stopping his tears at the price of his health.

"*Taste nothing between meals, not even a nut or an apple.*"

§ 89. Bolted Food and Broken Health.

A mother said to the writer, "My son has not allowed himself more than two and a half minutes to dine in three months." He was a pale, nervous, dyspeptic. He had not time to eat his dinner like a Christian, and so he must "bolt" it like a turkey. Rapid eaters are proverbially gluttons. Dinners eaten in three minutes usually weigh more than those meals which occupy twenty. It would be a

profitable invention that might enable a Wall street broker to dispose of a reasonable meal in two and a half minutes. To him time and money are everything, health nothing. Waking or sleeping, the one wish is, wealth or the means to attain it. In his premature and near-by old age, his houses and lands and ships and gold will not restore his shattered nerves to health, or stifle the cry of an outraged stomach. His palsied hand cannot reach back to seize the last opportunity; his days are filled with misery, and his nights are only a wild requiem of rest gone forever.



A WALL STREET MAN HAS ONLY THREE MINUTES FOR DINNER FINDS HE CAN SAVE THIRTY SECONDS BY EMPLOYING AN EATING MACHINE.

A half hour's rest after a hearty meal is an economy of time which no business man can afford to waste.

Feed two hounds, put the one in the kennel, and the other on the chase. Two hours subsequently, if an examination occur, it will be found, that the hound which rested shows advanced digestion, while in the other case, the food is hardly

changed from the condition in which it entered the stomach.

In the one case the vitality was employed in the stomach, in the other the nose and heels monopolized the life forces, and the stomach was deprived of that power needed for digestion. The same rule applies to man. After eating, rest, lest your stomach bear testimony against you.

§ 90. Eat Slowly.

This you must do for enjoyment or health.

Keep your food where you can enjoy it; that is, only in the mouth. The idea of bolting a meal to enjoy it! Have you ever tried perfect mastication? If not, try it. Even dry bread, thoroughly masticated, and then retained in the mouth to tantalize and coquet with the gustatory nerve, provides a rare comfort.

Rapid eating is a common cause of dyspepsia. When the food is hurried to the stomach in large pieces, uncut, and unmixed with the saliva, the digestion is prolonged and difficult.

Abundant conversation, and *absence of all drinks* while eating are two means of our curing this *low habit.*

§ 91. Eating when Tired

is directly productive of dyspepsia. Housekeepers, farmers, students and teachers, habitually tax their stomachs when body, brain, and spinal cord are in a

fatigued state. From this cause women become neuralgic and dyspeptic; farmers find themselves chained to old coughs and "liver complaints," while business and professional men suffer from "throat ail." The stomach is as sensitive to bodily tone as a barometer to atmospheric conditions. It is never less weary than the body. A universal habit of sleeping a half hour before the middle and after meal of each day, and indigestion would soon go out of fashion.

A vast amount of dyspesia is the result of "*brain and body fag.*"

§ 92. When to Eat the Best Meal?

In the morning, when the body is fresh from sleep, and the stomach rested by thirteen hours' fasting. The brain, which furnishes digestive power, via one of its heaviest nerves, in the early hours of morning possesses its maximun of force, and then best supplies the stomach with vital energy. At this happy confluence of condition and circumstances, a man may lay in a judicious store of bread, meat, and fruit that shall furnish a basis for the next twenty-four hours' wear and tear. It should be done leisurely and thankfully; I say *thankfully*, because a grateful, benign frame of mind is conducive to good digestion.

I knew a wise woman, once, who always sent her child from the table unless it presented a smiling

face. She deemed it bad manners to sit in the presence of others with a taciturn countenance. The lady was wiser than she knew. It is not only bad æsthetically, to carry a frowning visage to the table, but unphysiological. How natural to be thankful in the morning. He must be an idiot, or a moral nonentity, who can forget that his safe passage through the hours of darkness is scarce less than a miracle. Every hour after the day's work fairly begins, lessens digestive force, for the reason that nervous force is now appropriated to work, thought and emotion. Hence six P. M. dinners are unwise or worse.

§ 93. Why we Dream.

A clergyman related the following to the writer: "I eat temperately and intelligently, nothing between meals; and my 'tea' is light, and taken at least four hours before I retire. I have not the ordinary symptoms of indigestion, but my sleep is much disturbed by *dreams*."

Upon inquiry, I found the gentleman always read from supper until bed-time. He deprived the stomach of vital power by inviting the blood to the brain. When he went to sleep, nature "rolled up her sleeves" and went down to unload the stomach. In the act she created a disturbance which, being reported to the sensorium, ended in a *dream*.

Let the stomach rest after eating, even lightly.

A young "*Hoosier*" was anxious to know why he "dreamed about his great-grandfather every night." It had been his custom to eat mince-pie before he retired. The doctor advised him to add *beans* and bacon, so that his dreams might include his great-grandmother, and some hobgoblins, that he might "raise the devil generally" through the night.

§ 94. What shall We Eat?

is an ever-recurring question, growing more important as people become more intelligent.

Even medical men are poorly prepared to give satisfactory replies. If a physician is asked how a mother may supply insufficiency of breast milk for her child, he will probably advise ale, or porter, notwithstanding the fact that chemistry teaches these contain very little in common with the structure of the child's brain, bone, or muscle. The best medical institutions in our land teach but little on the subject of diet; and few graduates can prescribe a judicious diet for mother or child. A recent medical writer in this city insisted on the absurdity of scientific feeding as applied to individuals, claiming "what is one's meat is another's poison," forgetful of the fact that he was asserting an ignorance, and betraying a want of culture, which any educated man should be ashamed of.

VEGETARIANS deny the right of man to a meat

diet. Their claim is a mere abstraction, unsustained by science, history or facts. Granted that Dr. Graham and Louis Carnaro enjoyed good health to advanced years, and that the strong boatmen on the Mediterranean coast, with them, ate only grains and grapes or other vegetables; still it does not follow but that they might have lived even longer on a mixed or meat diet. In short, they only prove that life may be well sustained upon an exclusively vegetable diet. This, none will doubt.

A second class claims England as the beef-eating nation of the world; and she excels in qualities of brain and back, and provides the athletes of the nineteenth century. This only proves that beef is an excellent article of diet. In either case the conclusion is empirical, resting upon *experience*, which makes a score of fools to a single philospher.

An old Dutch lady thought she had cured with cow's milk five hundred children with measles. An old man thinks bacon and *saur kraut* the most healthy diet, because the doctor has not visited his family for years. A medical expert said in my hearing recently, that oysters were preferable for a man whose diet was limited to a single article (see Table, § 49). Each could fortify the position assumed, by scores of facts. Yet each conclusion was false, and unsupported by science. A Western editor endeavored to secure brain for his child by feeding oysters.

If he had persisted, and given these only, his child would have been first a fool, and then a corpse. Oysters are easy of digestion, when properly prepared for use; but they lack elements of brain structure, and are deficient in that which preserves the warmth needful for life.

§ 95. What Not to Eat.

First. Eat nothing unless you are hungry.

Second. Eat nothing unless your stomach is empty.

Third. Eat no fat pork, potatoes fried in lard, pie-crust, or other pastry containing lard or other *filthy* grease; cabbage boiled in grease, mince pies, preserves, sardines, or aught else which careful observation has shown to be indigestible and productive of discomfort or dreams.

§ 96. Never Eat unless You are Hungry.

Never invite an appetite. Those ladies who insist on loading your plate when you have no desire for food, perpetrate untold mischief.

When the stomach is in a condition to digest food it will always crave it; and oftentimes it calls when it is incapable of digesting.

§ 97. Food that "Touches the Spot."

A discordant laugh. A merry one. A voice filled with music; another like a cracked pot. A hand full of royal feeling; another like Uriah Heep's. A

meal which you relish; a second as juicy as chips; a third disgusts you. Do you wonder why? Poor cooks, dull, stupid, sleepy cooks, spoil the best beef. 'Tis not the food alone, but the manner of serving it. Æsthetic people enjoy a meal as much with the eyes as mouth. A hog will eat almost anything. So will some men. Beware how you prepare food for that "large-eyed, dreamy woman." Wound her eyes and hunger flies.

No hash! No *pie-plant* in strawberry season! No "*mux*." Only a *little*, tastefully served. Try and find out what she would like. If you do, you may "touch the spot." Ten cents of what she relishes goes farther than two dollars of what she does not.

§ 98. How Long to Chew a Mouthful of Bread.

Presuming you are well bred, and not hurried to your business with a vulgar desire to cheat somebody—about thirty seconds. Try it. Always remembering the most genteel people are seldom in a hurry.

§ 99. How many Kinds of Food at one Meal?

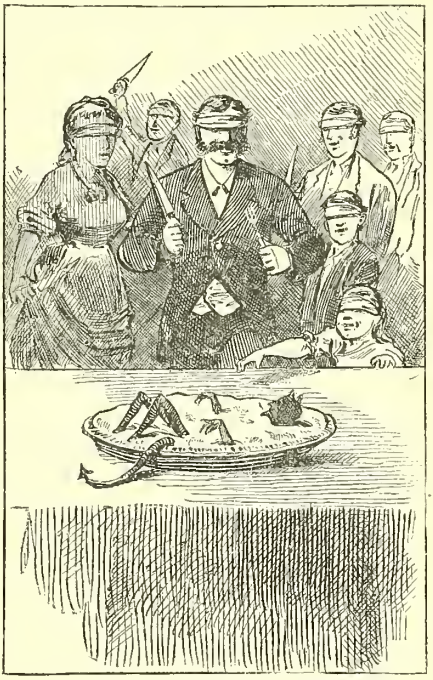
Better few than many. Many dishes invite overeating. Few people would gluttonize if the meal comprised three simple dishes.

Housekeepers would save trouble, time and expense by an elegant preparation of three or four dishes instead of the many. The number of dishes

prepared or partaken of has, however, less to do with proper eating than a due consideration of time, quality and quantity, as applied to a meal or month.

§ 100. Shall we Eat Pie?

Yes, if there is no lard in it. To determine the respectability of a pie, you must study the inside as well as the outside. Study most rich, greasy pies carefully, and you will discover his satanic majesty, horns, hoof and all. Ignorance of dietetics blinds the common pastry-consumer. Taste is his super-active special sense. No wonder the dyspeptic and health reformer join in a crusade against them.



THEY KNOW NOT WHAT THEY EAT WITH THE PIE.

Fat, rich, meat pies are the most unwholesome of foods. Yet may we never outlive the good old-fasioned apple pie, pumpkin pie, or the squash.

The German language has no name for our *pie;* nor has he who speaks it our dyspepsia. "*Fritz*"

must be happy; but what has he not lost by having no pie?

§ 101. Dessert for Dinner?

Always. The choicest are baked apples and cream. Oranges, pears, grapes, strawberries, good humor, sprightly conversation — talk, can't you? Then learn. These will not give you indigestion. Rich pies and puddings may.

§ 102. How much Money for Eating Purposes?

The less the better, so the body be fairly nourished.

A frugal meal, on a handsomely furnished table, with agreeable companions, is preferable to prodigality ungracefully dispensed.

Charming table etiquette, and a few exquisite dishes, would not be a bad prescription for all the "erring qualities of digestion." A friend of the writer appropriates two dollars per week for each member of her family. Her table is a model in appearance and attendance, which, coupled with a certain indescribable "atmosphere" that some high-bred women unconsciously impart to all about them," renders each meal an episode. Her dessert of baked apples and cream is superior to ordinary plum puddings and mince pies. She has also the "gift of conversation." Ideas are the choicest spices and flavors at table. Other things equal, a conversa-

tional hostess can set a better table with less money than she of the single syllable order. "Brains" pay as well in dining-room and kitchen as in any other department of labor.

Among Mr. Vanderbilt's first fortunate investment was a wife, who saved money from a wisely-ordered table. This money afterwards enabled him to buy a schooner.

If all the young wives of our mechanics and merchants were to imitate Mrs. V., we might yet live to see a host of Vanderbilts. There is nothing more discouraging to a young mechanic than to eat three dollars as fast as he earns it—especially if he be not too strong in health, and sees a family growing up about him.

Every shrewd, far-sighted woman will save a *little each week*, no matter how trivial the income. By deftly mixing her smiling sweetness and simple dishes, she can economize and rule her department. A lady friend of ours tried it. Three months of bean soup, brown bread, oat meal, fruits, a baby that never cried, husband ten pounds heavier, and a plethoric pocket-book followed.

Of course the husband "grumbled" for a few days until he became "civilized." Two charming parlor pictures, and her husband's refusal to return to the old way, was the result. Not he who *earns*, but he who *saves* grows rich.

CHAPTER X.

Catarrh.

§ 103. Its Causes and Cure.



CATARRH is so common, and its victims number so many, that it demands more than a passing notice.

It is defined by the French physicians as "increased secretion from a mucous membrane." In this country the term, by popular consent, is applied to a "cold in the head" uncured; or inflammation of the lining membrane of the nose and adjoining passages.

One condition of inflammation is heat, which dries the mucous membrane of the nose; therefore, a first symptom of catarrh is a dry nose.

A red-haired friend of my boyhood had feet too pretty to be encased in overshoes; and each winter morning on his way to the school-house he took cold. In his seat he would look steady and sombre as a deacon, while he whistled one half of "Yankee

Doodle" through his nose. Our teacher, Burke, regarded Dan's nose much as Mr. Caxton did the baby, wondering that "so little a thing could make so big a noise."

Heat also relaxes the membrane; then follow watery discharges. These become more consistent and profuse, until finally gathering in quantities, scabs are formed which affect the membrane as a poultice would the outer skin. If this matter remains long it rots and renders the breath offensive.



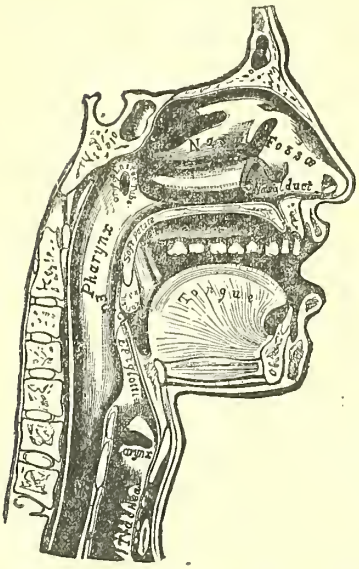
"DAN" WHISTLING YANKEE DOODLE THROUGH HIS NOSE.

If this inflammation is not arrested it invades the passages which lead from the nose to the ears, cheek-bones, frontal sinuses and throat, then the voice-box and tubes of the lungs. In the latter case we call it bronchitis, or catarrh of the air-tubes of the lungs.

§ 104. **The Nose.**

is a double organ; hence we have two noses, each divided into three chambers and communicating with passages to frontal sinuses, where the plates of the

skull are doubled, to the hollow or antrum of the cheek-bone, and with the throat. Three of these passages are double and all of them are liable to be involved in nasal catarrh. Hence by catarrh we often mean a prolonged cold in the head, with pains in ear, throat, or jaw, or a disagreeable fullness of the head, and a stuffed sensation in the nose, and many other symptoms which are frequent or constant sources of annoyance, if not distress.



INTERIOR OF NOSE AND ADJACENT STRUCTURE.

§ 105. Symptoms of Nasal Catarrh.

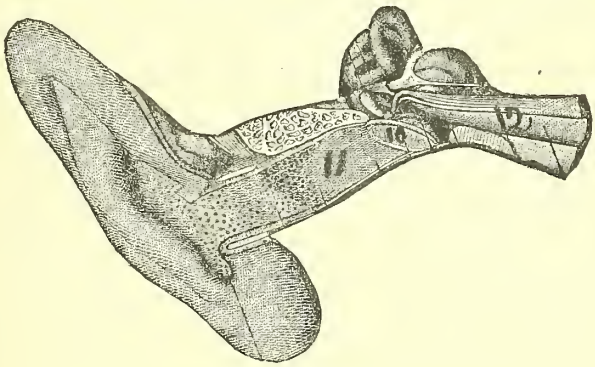
These vary in almost every case, and also in different stages of the same case. They embrace dryness, and itching or bleeding, soreness or discharges from the nose; burning heat and pains through the bones of nose and forehead, confused thought, watery eyes, a "stuffed sensation" in nose and throat, hoarseness or loss of voice, profuse discharges, at first thin, afterwards thick, yellow or greenish, sometimes streaked with blood.

These effusions often are viscid and adhere to the

palate or nasal structure, producing nausea, hawking, coughing, and spitting, especially in the morning; sometimes these accumulations prevent breathing through the nose. Catarrhal patients are generally very sensitive to exposure to drafts of cold air, which increase the discharges. Partial deafness, increased with renewed cold, noises in the head, and offensive breath, are also common symptoms.

§ 106. Catarrh the Cause of Deafness.

Loss of hearing is most frequently caused by this



SECTION OF EAR.
10. Ear-Drum; 11. Outer Canal; 12. Eustachian Tube.

disease; probably nine-tenths of all causes of diminished hearing begin in nasal catarrh. These are easily determined, because the deafness is increased by a renewed cold.

The structure of the ear may be seen from the engraving, which represents the outer ear, its middle chamber and the cochlea, or "snail shell" in which is

distributed the auditory or nerve of hearing. The trumpet-shaped tube, called Eustachian tube, extends from the middle ear to the nose; and any inflammation of the nasal membrane is liable to traverse this tube. Thus the sense of hearing becomes involved with catarrh.

In treating these cases of partial or complete deafness, the cause must be removed. The writer meets with uniformly good results by treating the catarrh, and not interfering directly with the structure of the ear. Specialists, known as Aurists, who treat *only the ear* rarely meet with success. It is folly, or worse, to apply remedies to the ear when the cause of deafness originates and continues in the nose. Not long since a gentleman called on me who had so far lost his hearing, that it was difficult to talk with him; and in two months his hearing was perfectly restored.

The treatment was directed to his catarrh. No operation, drops, or other local ear application would have done him any good. I cannot urge this too strongly, because so many are duped by those who presume to understand and treat only the ear. No physician is capable of treating a fair proportion of cases of deafness *until he understands and can cure catarrh.*

§ 107. Ear Discharges

originate in an inflamed nose and throat, generally following scarlet fever, small-pox, or measles. These

cases mostly commence in childhood, and depend for their continuation upon a scrofulous habit of body. They are treated with success by carefully regulating the diet and general habits of life, by astringent injections in the ear, preceded by use of syringe, with a warm, weak solution of castile soap night and morning, and by changing the alterative medicine each week. Ear injections should always be followed by an insertion of cotton for several hours; otherwise the patient may take cold in the ear and the bad symptoms become aggravated. If the discharges are not arrested, the delicate structure of the ear will be wasted by ulcerative inflammation, and the hearing become permanently impaired. The treatment of running ear is in bad repute, because the hygienic habits of the patients are generally overlooked.

Frequent bathing, a soluble condition of the bowels, and abstinence from pork, grease, and eating between meals, must be strictly enjoined.

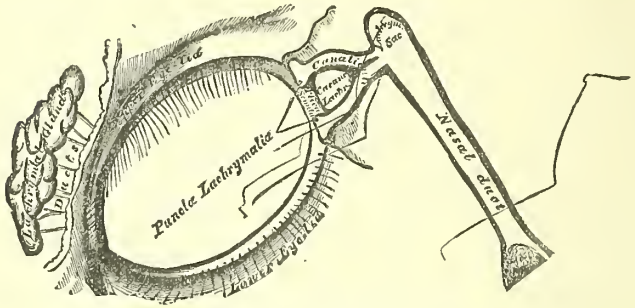
Parents cannot be too severely judged who allow the running ear of a child to go uncared-for, when timely treatment would do away with the offense, and save the hearing.

§ 108. Weeping Eye and Catarrh.

The tears are secreted by a gland located near the upper and outer structure of the eye-ball. In health they first lubricate the eye and then pass away

through a channel which connects the eye with the nose. This accompanying engraving illustrates the structure referred to.

The inflammation in nasal catarrh extends to those



NASAL DUCT WHICH IS OBSTRUCTED IN "WEEPING EYE."

tubes. Thus they become obstructed so the tears cannot follow their natural course, and they are forced over the cheek. This is an extremely uncomfortable disease, frequently resulting in an abscess, and permanent facial deformity.

TREATMENT FOR WEEPING EYE.

The writer has never examined a case of "weeping eye" that was not complicated with catarrh of the nose, except a few where injury from burn or bruise provided an independent and exceptional cause.

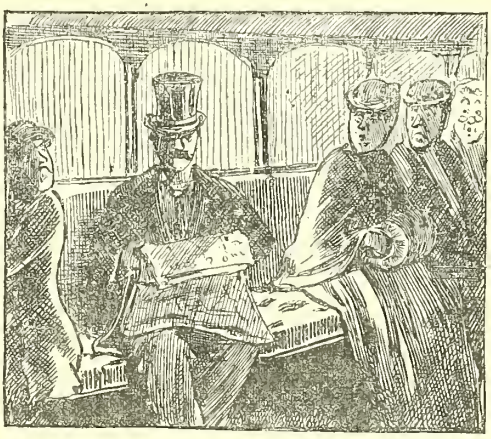
The common method of tubal dilatation by mechanical means is not only unphilosophical, but it has proved the most unsatisfactory branch of oph

thalmic surgery. Temporary advantages are gained by the use of probes or tents; and in very rare cases the benefit derived is permanent; but on the whole, eye surgery has lost many friends by the indiscriminate use of this common method of treatment.

In the early stage of this disease, the remedy is most effectual when confined to the treatment of nasal catarrh. This will be explained in its proper place in another part of this volume; and to it the reader is referred.

§ 109. Bad Breath

is generally the result of catarrh of the nose. It is one of the most unpleasant symptoms, frequently rendering its victims unfit to associate with friends, and unwelcome members of any assembly. When the sense of smell is impaired, people, otherwise respectable, often compel their friends to submit to a nuisance they little dream of. Catarrh, with bad



A CASE IN WHICH A DISGUSTINGLY BAD BREATH POLLUTED AN OMNIBUS.

breath, may be communicated from husband to wife or children.

Many cases are infectious, and where they are not, loved ones may be alienated by a breath which pollutes and poisons the air that others are compelled to breathe. Yet, it is difficult to tell a loved one that his breath is very offensive; and wives sometimes submit to this loathsome companionship for years, before they will tell their husbands how *disgusting they are.*

§ 110. Uncomplicated Catarrh.

The reader will understand the above to be a misnomer. Catarrh is always associated with dyspepsia, kidney, skin, or bowel complications, or specific poison of the blood.

An energetic business man sought the advice of the writer, when the following colloquy occurred:

Patient. "Doctor, my friends say you thoroughly understand catarrh; and I want you to treat mine."

Dr. E. "How is your general health, sir?"

Patient. "Excellent. Nothing in the world ails me but catarrh."

Dr. E. "How is your appetite?"

Patient. "First rate; my stomach is all right. I came to see you about my *catarrh.*"

Dr. E. "Do you belch wind?"

Patient. "Yes; I have had that for years; but

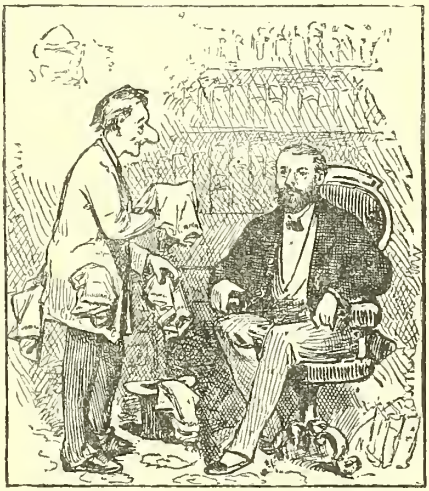
that's nothing. I only came to consult you about *catarrh*."

Dr. E. "Do you perspire readily?"

Patient. "I don't sweat at all; have not for years. Skin is dry and harsh, but I don't care for that."

Dr. E. "Are you weak across the back, sir?"

Patient. "Yes, that is an old habit; but I don't care for that. It is only my *nose;* I soil a half-dozen handkerchiefs every day."



"DOCTOR, I SOIL HALF A DOZEN HANDKERCHIEFS EVERY DAY WITH MY CATARRH."

Dr. E. "Are you constipated?"

Patient. "Oh, yes! sometimes go a whole week, but that doesn't trouble me. If you will cure my *catarrh*, I will stand the rest."

He regarded his health good with dyspepsia, a dry skin, and almost every other functional derangement which produces bad blood conditions; and devoted his anxiety to his nose; while the nasal discharges were a simple result of the conditions obstinately overlooked. Of course he had tried every

snuff and "*wash*" to no effect but to sodden and sour his mind.

§ 111. Catarrh a Blood Disease.

A perpetuation of catarrh depends entirely upon the condition of the blood. It is as much a blood disease as typhoid fever, which, indeed often involves catarrh. It is impossible to be healthy otherwise and have catarrh. Call it a "cold in the head;" and if that alone ails you—a few days—a free sweat, absence of food, a soluble condition of the bowels, and you are well.

"If, then," you ask, "the continuation of catarrh depends, upon impure blood, why is not mine cured, since I have been taking *blood purifiers?*"

The so-called *Blood Purifiers* but furnish ignorant people an opportunity to pay "fool tax." If your *impure* blood is caused by an inactive skin, you need a sweating-bath and frequent change of clothing.

If, from dyspepsia, you need a proper diet, may be, constructive medical treatment. If, from scrofula, you need hygienic and medical alterative treatment, and the remedies changed every week, etc., etc.

But, irrespective of the cause of your *impure blood*, you have used "Vinegar Bitters," or some equally vicious advertised nostrum; and then you wonder "why your blood is not *pure?*" The fact is, you have been *misled.*

§ 112. Scrofulous Catarrh.

Many people think themselves free from scrofula because they have no ulcers, carbuncles, running ear, rotten bones, or enlarged glands, while these are only symptoms. In another part of this volume it will be seen that scrofula may be produced by breathing bad air. When we speak of scrofula, we practically mean that the blood lacks, or has lost, some constitutional element.

Catarrh is a most frequent expression of infantile scrofula. Children most afflicted by it have discharges from nose or head, take cold easily, and are peculiarly liable to lung disease. They are pale and puny, and are raised with difficulty, if at all. The glands of the throat are liable to swell, and croup is fond of such children.

§ 113. Dyspeptic Catarrh.

So called when, with nasal catarrh, the condition of stomach, or other digestive organs, is such that healthy blood cannot be made.

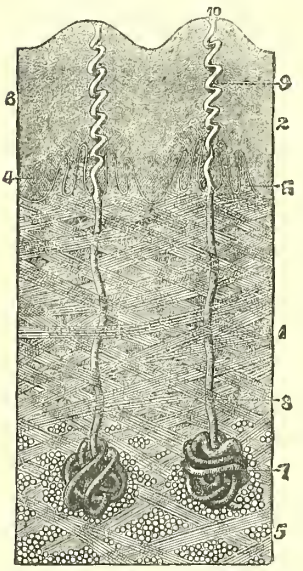
Dyspepsia or indigestion perpetuates catarrh, by establishing unnatural or unhealthy blood conditions. By unhealthy blood we mean that which lacks essential properties, or that which possesses properties that do not properly belong to it. In cases of nasal catarrh from this cause, the nose becomes the point of expression for diseased conditions, as an ulcer elsewhere may be in a case of scrofula.

Weak Back and Catarrh.

A very large proportion of persons who suffer from catarrh, complain of a weak back. In such cases the kidneys fail to do their appointed work; the blood is impure in consequence, and the discharge from the nose continued or increased.

The kidneys should separate from the blood five hundred grains of urea (which is the ashes of the nervous system), in twenty-four hours. This done imperfectly, or in part, and catarrhal or other complications are aggravated, as in cases of rheumatism or gout.

Catarrh and Dry Skin.



MAGNIFIED SECTION OF SKIN.
10, 8, 7. Sweat glands; 5. Subcutaneous and fatty tissue.

The skin is one of the most important blood-cleansing organs. Many miles of tubing, called sweat glands, collect the dead tissue from the body and carry it away. In this manner passes off more than half of all the solid and fluid food for the body. When this is feebly done, or only in part, the other emunctory organs are charged with its elimination; and if there be ulceration in the nose, or on the leg, the discharge is in-

creased. Thus, we see, a common cold with a dry skin aggravates an ulcer on any part of the body; because then nature will use a diseased nose, or a sore leg, as an outlet for that which should pass off through the skin.

CONSTIPATION

results in impure blood. The absorbing capacity of the intestines is such that matter which should be excrementitious is dissolved, carried to the blood, and this foreign or "impure" matter must find some other outlet. This may be through skin, kidney, or nose if this member be sensitive.

§ 114. Doctors' Treatment of Catarrh.

It is a notorious fact that the great majority of medical graduates have only a limited understanding of the nature of catarrh or what causes it.

Recently the writer was informed of a county medical society in Michigan, whose members discussed the question of catarrh, during a regular monthly session, and decided by a unanimous vote that it was a "*climatic disease, and incurable.*"

One of the members of this respectable (?) medical body, said to the writer:

Dr. P. "Doctor, what success do you meet with in treating nasal catarrh?"

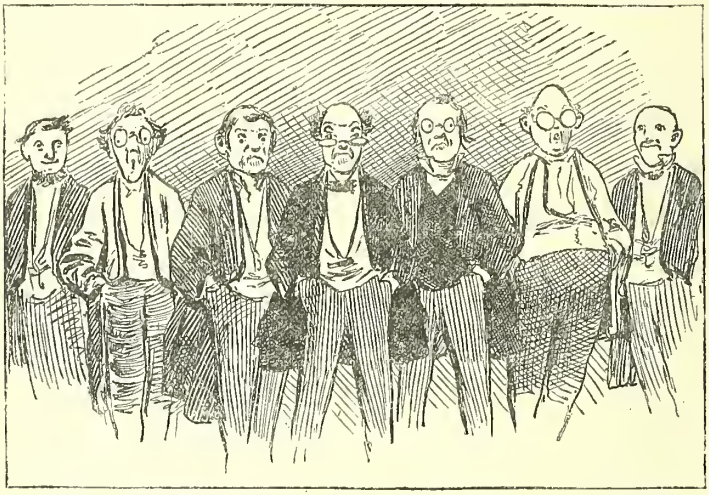
Writer. "Uniformly good, sir."

Dr. P. "I cannot handle it. I believe it is caused and continued by our climate."

Writer. "Then why is it that everybody who breathes your climate does not have it?"

Dr. P. "I can't tell."

Writer. "Doctor, how do you feed your catarrh patients?"



"WE," MEMBERS OF —— COUNTY MEDICAL SOCIETY, MICH., "BELIEVE NASAL CATARRH A CLIMATIC DISEASE, AND INCURABLE."

Dr. P. "I pay no attention to their diet, but let them eat when and what they please."

Writer. "What do you advise in such cases when the skin is dry, and perspiration very limited?"

Dr. P. "I don't care anything about the skin in catarrh cases."

Writer. "Do you recognize constipation as a frequent complication?"

Dr. P. "I see no relation between constipation and catarrh."

Writer. "Doctor, what is your treatment?"

Dr. P. "I medicate the nose with *snuffs*, injections and washes; indeed, I have tried everything without success."

Does the reader wonder that he failed, when catarrh is not *a disease*, but a "flag of distress" which nature has hung out, saying, there is something wrong within?

When this condition is perpetuated by syphilitic, diptheritic, or other special blood poison, or by scrofula or constipation, there is more required than any mere local treatment to effect a cure.

§ 115. How not to Treat Catarrh.

Nostrum venders advertise remedies for two classes of disease. One class is incurable; the other embraces those diseases imperfectly understood, or unsuccessfully treated, by a majority of the medical profession.

Phthisis pulmonalis or true consumption, in its advanced stage usually belongs to the first class. A small abscess may occur in the lung, and the person not die from it, but where the abscess is of any considerable size, the result is too frequently fatal. Every city in the land is placarded with "Cures for Consumption."

There is another class, curable but still uncured.

To this belongs catarrh. Your patent medicine vender offers no specific for measles, small-pox, or scarlet fever, for these are successfully treated; but every street-corner is infested with some "snuff" or other nostrum for the *cure of catarrh.*

The disease is extremely common; the remedy sought with fervor, faith, and money. The supply follows the demand, and, whether cured or not, the "remedy" is always at hand.

"Catarrh Snuff." *It never cured a single case of catarrh*, and never will, until the nature of the disease is changed. This is not only true of catarrh snuffs, but all other mere *local remedies*, which are used to produce a mere local effect. You perhaps have a bad cold and suffer; you use some snuff, and in time you are better. You give the credit to the snuff, I, to nature. As we proceed with the discussion the reader shall see why catarrh snuff will cure all cases that would get well without any special treatment but none other.

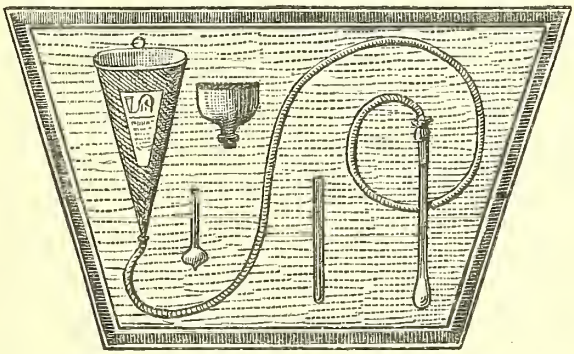
§ 116. Treatment of Catarrh.

Inquire carefully into the cause, which, being clearly determined, we must seek to remove.

First. By rules (see Health Rules, in another part of this volume) carefully regulating the habits of the patient. Proper eating, involving time when meals are taken, quantity and quality of diet, etc. This is a first duty of the physician in the treatment

of all chronic diseases, and particularly in catarrh.

Clothing should be equally distributed over the body, and the feet protected with thick-soled boots. The skin kept natural by bathing two or more times a week, each bath followed by brisk friction with a towel. Constipation overcome by the use of oatmeal, unbolted wheat flour, fruits, and if need be, an



DR. EVERETT'S FOUNTAIN SYRINGE AND NASAL DOUCHE FOR TREATMENT OF CATARRH.

occasional cathartic. In case of special poisons, the vapor or Turkish bath is of the utmost importance.

In all cases the treatment is more rapidly effectual by judicious medical administration; in many, this becomes absolutely necessary. I cannot give you a formula adapted to even a majority of cases; for that which would meet the demands of one case might do no good in another, arising from a different cause. Local treatment is important as an adjuvant, but

cannot be relied upon when the constitutional treatment is neglected. This is best accomplished by the Nasal Syphon or Nasal Douche bottle, which will hold at least one and a half pints of liquid, and should be used each night and morning. For common use, there is nothing better than tepid salted water.

The amount of salt and temperature of the water may be properly suited to the comfort of the patient; and by inserting the end of the tube in the nostril, meantime leaning forward, and breathing through the mouth, while the body of the liquid is raised higher than the head, the contents of the bottle will pass in a stream over the internal surface of both noses, thoroughly cleansing the membrane, and encouraging healing of the parts diseased. In both applications, each alternate day, a deodorizer and disinfectant may be added to advantage. The selection of what is best for each case properly belongs to the physician in charge. The structure of the nose is such that snuffs or contents of syringes cannot be applied to but a small portion of the diseased surface, to say nothing of the fact that the disease is a general, and not a local one.

In treating catarrh we have applied the same principles that we would in curing an ulcer on the outer part of the body; and there is no doubt that every case of catarrh may be cured where the blood condi-

tions are such as would permit us to treat successfully an ulcer on the leg or arm.

When the inflammation has advanced so that the lining membrane of the throat, voice-box, or bronchial tubes are involved, it is necessary to substitute an inhaler for the nasal douche. In the treatment of a case they are generally combined with great advantage. The engraving on this page represents an instrument the writer has used for years with the best results. I would impress upon you the following facts:



INHALER FOR TREATMENT OF CATARRH, THROAT-AIL, ETC., ETC.

First. That catarrh is a *blood disease, and should be treated similarly to an ulcerated surface on any other part of the body.*

Second. That all "snuffs" or other treatment confined to the nose alone will fail in every case.

Third. That catarrh is perfectly curable when the treatment includes the common-sense involved in the foregoing consideration of the disease, in all cases securing proper functional conditions for the body; and when the blood is tainted by scrofula, or a specific poison, it must be restored to healthy conditions before the nose can be perfectly cured.

CHAPTER XI.

§ 117. False or Bronchial Consumption.



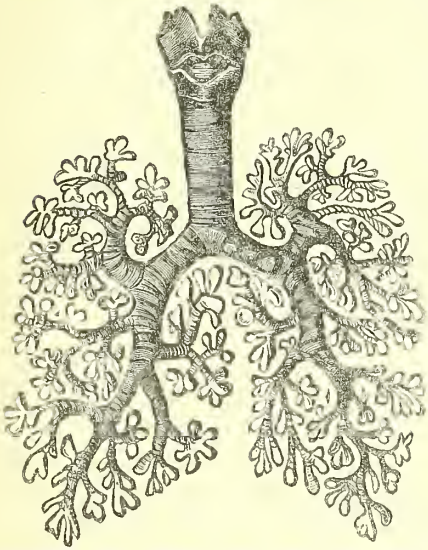
ELSEWHERE the writer has discussed *consumption proper*. Akin to it is another wasting disease, depending upon a slow, progressive inflammation of the lung structure, beginning with the mucous membrane lining the air passages.

It is usually the successor of nasal catarrh, which the reader will understand is inflammation of the nasal membrane and associated structures.

If the inflammation extends to the back part of the mouth, we call it pharyngitis; if to the voice-box, it is called laryngitis; if to the bronchial tubes, it is called *bronchitis*. These tubes are the "wind-pipe" continued; and they terminate in a cluster of air-cells similar to a bunch of grapes. These little cells are numbered by millions, and are lined by a very delicate membrane.

On one side of this membrane is the blood from the heart, on the other side the air we breathe. It would cover an area of about one twentieth of a

square mile if stretched out; and the entire surface should be fanned by every inspiration. It is very sensitive to noxious gases, and through it stimulants and narcotics reach the blood, and rapidly impress the nerves.



VOICE-BOX AND AIR-TUBES OF THE LUNGS, WITH THEIR TERMINAL LOBULES AND AIR CELLS.

This membrane is the dangerous seat of the disease heading this paragraph—Bronchial consumption—a slow, tedious, lingering messenger of death, which numbers more victims than its twin that commences with tubercles.

§ 118. Symptoms of False Consumption.

It generally commences with a "cold in the head," sneezing, hawking, coughing, spitting, sore throat, and distress across the chest. As the cough increases, the sputum changes from a watery to a glairy, ropy consistency. This becomes thick, yellow, viscid, and, in later stages, often streaked with blood. Sometimes with bronchial hæmorrhage in considerable quantities. The disease is characterized by

spells of coughing, generally worse in the morning, and by a gradual loss of flesh. Night sweats, constipation, with periods of *looseness of the bowels*, shortness of breath, cold feet, and general debility of mind and body. A "tired feeling," and occasional sensations of heat in hands and feet, even when their touch is cold. These symptoms, with coughing and sensitiveness to atmospheric conditions, continue until time wears the flagging energies out, and eternity summons the spirit to service in another sphere.

§ 119. Progress of False Consumption.

Its progress is capricious. Now galloping its pretty victim to the grave in three months. Again, slowly forging the chains for forty years, and then giving its prize to "bowel complaint" or cholera, or some other innovator.

When the inflammation of the tubes tends to a thickened and fibrous condition, with a dry hacking cough, and a rough voice, it often lasts many years before it proves fatal. This is contradistinguished from the tuberculous consumption largely by the external sign that the latter disease rarely lasts over eighteen months, while the former may continue a quarter of a century.

§ 120. Complications with False Consumption.

It is rarely or never a primary disease. Scrofula, dyspepsia, constipation, "biliousness," loss of appe-

tite, bowel derangements, sexual debility, catarrh, and wasted nerve force, are its common companions. It frequently follows an attack of typhoid or other fever. In short, it always travels in companionship, and never alone.

§ 121. Curability of False Consumption.

In this, particularly, does it differ from tuberculous consumption. There is no doubt but bronchial inflammation often leads to tuberculosis; then the same principle applies to its treatment that would to the last named.

The cure of *false consumption* is simply a question of vitality. If the complications are serious, the disease may be fatal from the outset; but in ordinary cases the cure is easily effected, *if taken in time.*

Probably forty-nine out of fifty cases might be cured in its early stages; while the latter period of the disease, with bronchial hæmorrhage, and lost nutritive power, may offer little or no hope.

An experienced physician can generally predict results with comparative certainty. This of course presupposes a thorough knowledge of physical diagnosis.

The writer would insist upon the same skill here that he would in a case of true tuberculosis, for a description of which the reader is referred to another part of this volume.

Competent physicians seldom err in diagnosing lung disease.

§ 122. Treatment of False Consumption.

Here we must again introduce our old friend *Nature*, and tell you the *old, old story.* Recreation, rest, respiration, ventilation, sunshine, good wholesome food, pure air and a pony. Apply the rules we have carefully written for the "treatment of consumption." Taste no patent medicines. Go to some honest, sensible practitioner. Let him guide your treatment, always remembering that even *he* is little to you unless *his treatment accords with the best system of hygiene.*

If he tells you *to eat what you like*, dismiss him. If he permits you to *sleep without thorough ventilation*, and is regardless of your dress, work, exposure or drink, *dismiss him.* If he has some "wonderful discovery," or some wonderful drug which cures such cases as yours *always*, *dismiss him.* If he tells you all drugs *are* "*poisons*," and cannot help you, *dismiss him.* If he puts you on a *low diet*, or *gives you baths which take your strength from you, and waste your flesh, dismiss him.* If he tells you "water cure" or "movement cure," or a "Turkish bath," or a humbugging "respirator" will cure you, do not employ him.

Remember, and *your life* may tell whether you *do*

or not, the most learned of men always seek to surround you with every appliance nature provides for keeping you here as long as possible. The food that feeds and the wind that fans you; the bath which equalizes the circulation and removes effete matter; the moisture or dryness of the air around you; all these, and much more, the physician uses first. He does not leave the directions in a general way, but *specifically* prescribes them, and then *adds proper medical treatment.*

Fools believe alone in drugs and "doctors." Hygienic monomaniacs see no difference between a drug and the devil. A set of artful dodgers offer you harmless doses of moonshine, and ask you to "shut your eyes" and swallow. The elegant Stillé would look at you, question you, inquire into your history, and wisely direct your every habit of life, more carefully, than an unskilled physician could. If your case required, he would give constructive tonics to assist your digestion. He would certainly correct every functional derangement as far as possible with medicine and hygiene, and I am sure he would give you inhalations to be used several times daily. These to remove the cause of your cough, to lessen the sputa, heal the inflamed lung surface, and absorb the effused moisture.

I am also sure he would not put medicine in your stomach to secure any specific effect in your lung;

that he would give you no expectorants with opium, or lobelia, or mineral acids, or ipecac, or tartar-emetic to derange your digestion, or interfere with your nutrition, or with the elimination of disintegrated tissue. At least, the above indicates the exact course the writer would pursue in the treatment of a case of Bronchial consumption.

It were well if he could be more definite. That he could give rules, and recommend remedies adapted to each case. But this cannot be done. It is necessary to know just *what should be done* before you do it. The rules of life already referred to are applicable to every case, but the medical or instrumental appliance belongs to the physician, and none other. There is no greater bane of this age than the advertised specifics, and the mountebanks who make or dispense them. While we are sure that public education on matters of health is second to no other branch, we are just as certain that a wise administration of medicine belongs to the thoroughly educated physician, and not to the populace or the pretender.



DR. EVERETT'S INHALER FOR TREATMENT OF BRONCHIAL CONSUMPTION.

Good health depends upon wise living. This should every one *feel* and *know*. The abuse of drugs belongs to the quack and the ranter. The use of these to the *true physician* and none other.

§ 123. Asthma.

Many suffer from it, but it seldom or never causes death, directly.

It is a nervous disease characterized by difficult breathing, often following its subject, at intervals, into advanced life. It was once characterized by many names, such as dyspeptic asthma, congestive asthma, etc., etc.; but Dr. Salter properly observes, "All asthma is paroxysmal, and in each case the source of the disease must be studied to direct the means of relief intelligently." It is caused by moist atmosphere or fog, by dyspepsia, by debilitated nerves, hysteria, etc.

It may be stated here that most asthmatics are over-eaters. Gluttony is a commonest provocation of the attack. In these cases all treatment fails, unless the diet of the patient can be restricted. This he will seldom allow. When asthma is complicated with bronchitis, and the attack preceded by a cold, cough, or sneezing, the case can generally be improved or cured, by curing the catarrh or liability to cold.

Hay Asthma is only relieved by change of resi-

dence during the time it is most liable to occur. It is generally relieved by going to the sea-side or mountains.

Uncomplicated Asthma is generally incurable. Smoking of mullen leaves, tobacco, stramonium, or brown paper, sometimes wards off the attack.

Treatment by inhalation is, by all means, the most effectual. It is a very treacherous disease, coming when we least expect it, and departing without a moment's warning; sometimes amenable to simple treatment, at other times yielding to no device. A teaspoonful of powder composed of equal parts of white rosin and loaf sugar at times furnishes wonderful relief; but *inhalation is worth all other means combined.*

§ 124. Throat Diseases.

These are largely of a catarrhal nature, except in childhood, when scrofulous complications exist. It is not only the pain or swelling which renders them disagreeable; but the hacking cough, hawking, spitting, and the unmusical character of the voice, extending to partial or even complete loss of voice, that render them troublesome, and prompts the sufferer to seek relief. In this class may be included "minister's sore-throat." The latter seldom or never exists unless the stomach is deranged. Dyspepsia and imprudent use of voice are its parents. A branch of

the large nerve directed to the stomach is distributed to the vocal organs; hence this intimate relation.

Our space does not admit of a full discussion; but under the "Treatment of Catarrh," the reader will find directions adapted to this disease.



CHAPTER XII.

Air: its Relation to Health and Disease.

§ 125. Lung Food.



THE lungs are fed by air as the stomach is by bread.

The atmosphere is composed of oxygen and nitrogen. Of the former, there is one part; of nitrogen four parts. The latter is serviceable only to dilute the oxygen. Added to these are a trace of carbonic acid, and more or less vapor. This we call *pure air*. Other gases or substances are found in it, generated from many sources.

Impure air is produced mostly by animal and vegetable decomposition. This may be from heat and moisture; but the most prolific source of bad air depends upon animal expiration. The carbonic acid thus produced is a worst enemy to health, and is met most frequently in our bed-chambers and unventilated sitting-rooms.

§ 126. On Breathing.

We breathe, or should breathe, twenty times every minute, through the nose and not the mouth. Nature has stretched across the nose, or the external openings to it, certain hairs, which take the place of strainers, keeping from the lungs offensive particles of dust, or other things which would irritate them, as they might injure the eye if brought in contact with its delicate mucous membrane.

The lungs are simple air-bladders, lined by a membrane so delicate it is called structureless; on one side of this membrane is air, on the other blood. Through it one way pass elements of the blood which have died, and in the opposite direction passes the oxygen of the air in the lungs, to unite with the blood, converting it from a dark to a bright vermilion color. Oxygen represents the entire value of common air, for human respiration. Nitrogen is the vehicle by which it is rendered acceptable to the lungs.

Air is valuable in proportion, first, to the amount of oxygen it contains; second, to the absence of deleterious or poisonous matter present. Put superoxygenated air in a bell-glass, and the bird which breathes it becomes wild and dizzy, lives fast and dies soon.

On the contrary, a diminished proportion would soon produce dullness and stupidity. This rule ap-

plies equally to persons. When the oxygen in a room becomes partially exhausted, the people are listless and sleepy, as much from the absence of oxygen as the presence of carbonic acid.

§ 127. Of Bedrooms.

We breathe twenty times per minute, and require from two to five quarts of air for each inspiration. Thus ten gallons, at least, are required every minute. Multiply this by sixty, and again by the number of hours in a day, and you will find each person needs a vast amount every twenty-four hours.

Let us say, one hundred for the day, and, therefore, fifty hogsheads during the night; or with exceeding generosity, call it twenty-five. Then with a bedroom as large as twenty-five hogsheads the air would be all passed to the lungs during the night. But before we can inspire two quarts of air, a similar quantity of impure or poisonous air must be expelled; thus when the night is half gone, the room would contain twelve and a half hogsheads of impure air mixed with the same quantity of yet unused air; hence the whole would be unfit to breathe.

Still, we must consider that bedrooms are built not larger than ten hogsheads, and that not one person, but three or four, occupy the same room. Add to this the fact that the expired air is loaded with carbonic acid, and organic matter, both of which are

very poisonous; then only can we have a conception of the injury to health from insufficient ventilation.

One pair of adult's lungs throws off one pound of solid carbon in twenty-four hours. This is exhaled as carbonic acid, which you may readily learn by passing air from the lungs, with a pipe-stem or tube, through a small bottle of lime-water, converting it from a transparent to a milky fluid. That is, the carbonic acid from the lungs uniting with the lime in the water is changed into carbonate of lime, or "whitewash."



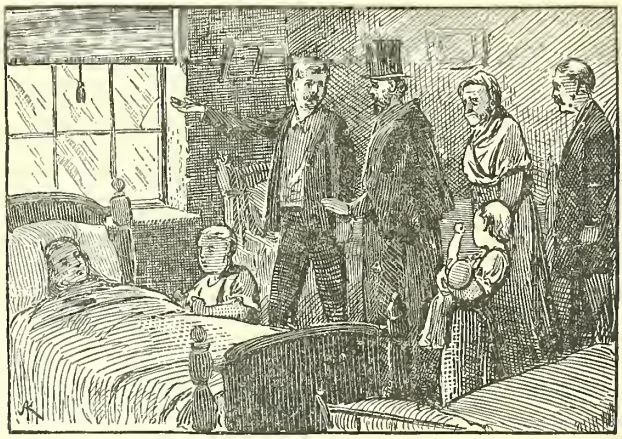
OPEN WINDOWS, OATMEAL, AND EXERCISE.

"That Courter Boy." The writer was recently called to the bed-side of an invalid lady. The bedroom was nine by fourteen feet, and the ceiling less than ten feet from the floor. In it were two large beds, a "trundle-bed," and a crib; it was occupied by four grown persons, two children, and a baby. The husband, after much thought, discovered the source of his wife's illness.

"I see now," said he, "that Courter boy threw a

stone and broke the corner from that pane of glass; Susan has taken a cold; and I have a doctor's bill to pay."

There were two windows, closed and curtained; and when, in the providence of God, a mischievous little boy had broken a window-pane, so that a few stray streaks of pure air should reach that filthy room, this man would defeat the provision by closing it.



"I SEE NOW, THAT COURTER BOY," ETC.

These people had pale faces, furred tongues, headache, and irritable dispositions. They had no appetite for breakfast and so invited hunger by pepper, mustard, pickles, and coffee. Dyspepsia was a common guest in that household, and stood by them a fixed friend.

§ 128. Carbonic Acid a Poison.

This is generated in the body and continually thrown off. If not speedily removed it may re-enter the lungs and produce disease or death.

Air containing one per cent. of it produces headache. Six per cent. is dangerous to breathe. Ten to twelve per cent. of carbonic acid will terminate life in a very short time. Each cubic foot of air thrown from the lungs contains seventy cubic inches of carbonic acid. Each cubic foot of coal gas consumed in your room produces two cubic feet of carbonic acid.

Burning one pint of oil produces about twenty cubic feet of carbonic acid. Burning one cubic foot of coal gas in your room, you consume ten feet of oxygen. Each person, by exhaling carbonic acid, poisons one foot of air every minute.

These facts clearly show the unhealthfulness of allowing lamps or gas to burn in your sleeping-room during the entire night.

§ 129. Is Night Air Healthy?

Towards, and during the night, in miasmatic districts, the emanations from the earth are productive of fevers. These may be avoided by a gentle fire in the room at sunset, rendering the atmosphere dry, and destroying the cause of the fever.

The atmosphere in darkness is less vitalizing than

at noon-day. Foolish prejudices exist against the former. It is all we have from sunset to sunrise; and the simple question is, "Shall we have it pure or poisoned?"

Gœthe would wrap himself in his blanket in cold weather, and spend the nights out-doors, under the trees. Soldiers preserve better health without than with tents, except in extremely cold or wet weather. Healthy, strong persons, may sleep with open windows the year round. Delicate persons, who are sensitive to cold, should avoid cold currents of air both night and day; especially at night, when the vital energies are lower than during the day. In the effort to avoid "*night air*," invalids generally get what is worse, that is, air poisoned by the carbonic acid and organic matter from their own bodies. It is worse than folly to seek out-door life at watering places for health, and each night occupy a small and unventilated bedroom. The night more than neutralizes the day.

§ 130. Scrofula from Impure Air.

Dr. Baudoloque, an eminent French physician, says: "The repeated respiration of the same atmosphere is a primary and efficient cause of scrofula."

"If there be entirely pure air, there may be bad food, bad clothing, and want of personal cleanliness, but scrofulous diseases *cannot exist*."

"That persons may live in the most healthy country, pass the greater part of the day in the open air, and yet become scrofulous because of *sleeping in a confined place where the air has not been renewed.*"

Young rabbits, born of healthy parents, develop scrofula and die of consumption in a few weeks, if fed upon heating food and compelled to live in a place poorly ventilated.

Mothers often develop scrofula in children by covering their cradles and otherwise depriving them of pure air.

§ 131. Air in Sick Rooms

Should be constantly changing, especially in acute diseases.

In scarlet fever, measles, small-pox, and other diseases characterized by increased heat of body, the air is rapidly loaded with emanations from the body, which charge the surrounding atmosphere with death. It is this which often increases the severity of the disease; and then follows a slow recovery or death.

In typhus and typhoid fever, by keeping the patients utterly out-doors, the mortality has been reduced a half or more, while the milder forms recover in half the usual time.

To control a fever, thorough ventilation, frequent bathing, and change of clothing are worth tenfold more than all that medicines can do.

How Much Air do We Need?—This is no longer a question of doubt or controversy among physicians. Dr. Parker says, after many experiments, "I have found at least 2,000 cubic feet of air per hour must be given to keep the carbonic acid at five or six per 1,000 volumes, and to entirely remove the smell of organic matter."

In some mining districts it is found necessary to give 6,000 feet per hour to each man, and if that amount be reduced, the work performed decreases.

The dullness and stupidity of children in schools depend mostly on the non-ventilation of the rooms.

Thus only can we explain why sensible people convert their pews into sleeping chambers within sound of a brilliant discourse.

Change of Air.

Air should move at the rate of about 100 feet to the minute, and the current should be from the ceiling towards the floor.

Carbonic acid and organic matter are both heavier than common air; hence, from the mouth they tend to the feet. In miasmatic districts of Italy the dog has fallen dead at the feet of his master, while the man walked along unharmed. The old-fashioned fireplaces were health-agents, by affording an exit for these two messengers of death.

Churches and school-houses are seldom well venti-

lated. The Chickering Institute, of Cincinnati, has an excellent system of ventilation; and the health of teachers, as well as the intellectual progress of the pupils, attest the wisdom of the founder, who, of all men, understands the value of pure air in a school-room.

Heald's Hygienic Home, on the banks of the Brandywine, in Delaware, is a model in the way of ventilation. This, among other wise methods adopted by its proprietors, has largely contributed to its popularity as a home for invalids.

We allude to these because efficient ventilation is entirely exceptional in the public institutions of this country.



CHAPTER XIII.

Consumption.

§ 132. Its Hopefulness.



CONSUMPTION, any year of the last decade, has dug more graves than scarlet fever, small-pox, and cholera combined. More than one hundred thousand annually, in the United States alone. Still we little fear it. They who have it will not believe it; and they who have it not scarcely can hear its muffled footsteps approaching.

It seems strange that organic diseases of the chest, in themselves fatally effective, should so closely "intermarry hope and death." Stomach, and liver, and intestinal diseases are canopied by dark clouds; from them we die a hundred times in fear, and only once in fact. Organic diseases of the heart and lungs are perfectly incurable, while the victims are unconcerned.

An anxious wife brought her husband to my

office. His heart was much enlarged, and he was liable to fall dead any hour of the day; yet he was totally indifferent, traded in patent rights, and whistled the "Devil's Dream."

A pale, beautiful, brilliant girl gathers the flowers to crown her upon May-day, and gazes with delight on the false rose which consumption has painted on her cheek; but she fades in the fall winds, and Christmas-day finds her chair empty, and her mother in mourning.



CONSUMPTION'S CHOICE.

Recently, a young, pale man, was accosted by his brother: "Henry, suppose you should die, what disposition would you have made of your property?" The question had been asked before, and he replied, half angrily, "I am not going to die. I am going to get well." In twenty-four hours he was in his coffin. A kind Providence cheered him to the last; and while fate was cutting his threads, one by one, he was glowing with hope of the near-by summer, and counting days and joys which belonged to another world.

Another has sallow complexion, deranged func-

tions of the liver, stomach, and bowels, sleepless nights, formless fears, business cares, gloomy future, and a comfortless now; yet he lives forty years to hug his sorrow and make others miserable. We seldom see an old hypochondriac die; his disease is mostly below the waist.



HYPOCHONDRIAC.

§ 133. Aristocracy of Consumption.

Consumption is eminently an aristocratic disease. The poor widow is unable to clothe her children well, and they run out-doors, breathe pure air, and make a



THE RUGGED LAD LAUGHS AT CONSUMPTION.

THIS PAMPERED BOY OF WEALTH MEETS CONSUMPTION HALF WAY.

noise, as all children should. They are rugged and strong, seldom have colds, but abound in mischief.

Another mother jealously guards her pale-faced boy from wind and want. He is pampered with pretty clothing, and pastry; while he is kept indoors, lest the wind and sun should prove unfriendly. No rugged exercise; no stimulation from hunger or privations. So he is called away and the mother left alone.

Out on the frontier a man neglects to supply the filling for space between the logs of his dwelling; the free air blows through, and consumption passes by. It neglects the cabin where a blanket takes the place of a door, overlooks the humbler dwellings of the poor, with shattered window, treads the marble steps and velvet carpets to the elegantly-furnished bed-room, and steals the darling of the household away.



ANTI-CONSUMPTION.

Its victims are those we can least afford to spare. They illustrate the old adage, "Whom the gods love die young." The least fitted for the vicissitudes of a struggling life, the best fitted for heaven. Tennyson's "May Queen" is typical of this class; and few of us but have seen her counterpart. She smiles over her hectic cheek while the nails are being noiselessly driven in her coffin.

Red-cheeked Bridget is in no danger, while the bright boys of eight and twelve, who seek conversation with men and talk and think beyond their years, are not overlooked.

§ 134. Consumptive Farewell.

It comes with this disease not always, but often. Most cases are curable if taken in time; but most are not taken in time. The hope which crowns its morning whispers delay until the afternoon; then it is *too late.*

"Farewell!" "Farewell!" These are golden words in the early sunset hour, from fading, ruby lips, encircled by a pale face set with roses—words sweetly said—Death is robbed of its sting, and Life immortal is fringed with promises of the beautiful now and happy hereafter.

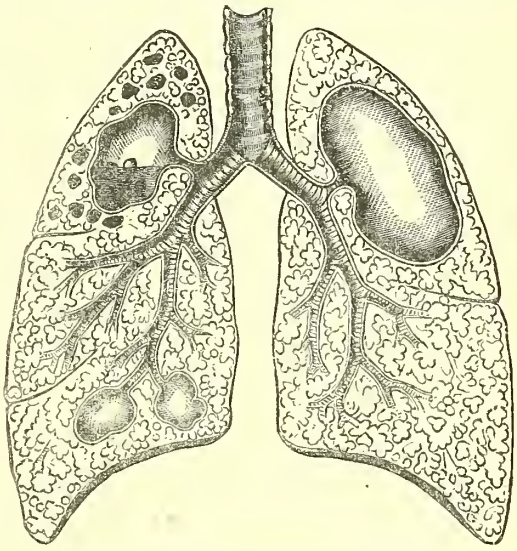
More and more she leans on her physician. Who that ever led a pale immortal to the river side, has not thanked God for the hope planted in her soul for these trying moments?

After all, death is not so terrible! It is but another baptism, wherein the young mother wades into the stream and falls asleep, to wake in the loving arms which await her on the other side. The thin curtain is drawn aside, we get a glimpse into Heaven, and she has gone on.

That is all—until we meet the beautiful forever.

§ 135. Phthisis a Blood Disease.

Consumption is a blood disease, depending upon a scrofulous habit of body. One person has scrofula, with skin as point of expression we call it—"Tetter" or Salt Rheum; another, enlarged glands in the neck —it is the same disease manifested through the lymphatic glands; a third has a similar condition of the blood, with tuberculous deposit in the lung—we call it consumption. It is not the essential character of the disease, so much as the character of tissue invaded, which renders consumption dangerous or incurable. The lung tubes terminate in little sacs with delicate walls which separate the air from the blood. These sacs, or air-cells, become filled with dead, tuberculous matter. This is at first fluid, but gradually assumes the consistency of new cheese.



CAVITIES IN THE LUNG FORMED BY CONSUMPTION.

When this de-vitalized tissue has undergone disin-

tegration, it, with the adjacent structure, forms an abscess in the lung. Preceding this local change is an abnormal condition of the blood, and a diseased condition of the membrane through which the effusion takes place.

§ 136. Scrofulous Consumption.

The ingenuity of medical writers of all ages has been taxed to understand or describe scrofula.

By one its definition is "a torpid condition of the nervous system, the blood being rich in some constituents, and poor in others." Another defines it as altered proportion of blood discs to serum, as compared with health standard. Still another writer says "the blood of scrofulous subjects has a deficiency of red globules, and an increase of albumen." Dr. Dunglison calls it "a morbid condition of the system, characterized by indolent glandular tumors," etc.

It is a diseased *condition of the blood characterized by deposits of de-vitalized accidental tissue.* This deposit may occur in the lymphatic glands of the neck, in the brain, bone, or kidneys, lungs, or almost any part of the body. If this diseased action occurs in the skin, we may call it scrofula of the skin, "tetter, or salt-rheum," if the deposit be in the primary air-cells, or primary lobules of the lungs, we call it *consumption.*

The reader will, then, understand consumption as scrofulous deposits in the lungs.. The term scrofula is imperfectly understood by most people. It does not necessarily mean tumors, or swellings, or ulcers, but a condition of the blood which is followed by dead deposits in any tissue of the body.

§ 137. Why Consumption is Dangerous.

Because the scrofulous deposit is in the lung tissue, composed mostly of delicate membranes and numerous blood-vessels, situated near the heart. When this deposit rots, the surrounding tissue is decomposed, blood-vessels are broken, and the heart, by mechanical force, pumps the blood through the lung substance to the mouth.

In other words, consumption is dangerous not from the essential character of the disease, but from the character of the tissue invaded, and its anatomical relation to the heart.

§ 138. Three Stages of Consumption.

First. There is an abnormal condition of the blood, and of the membrane which constitutes the walls of the air-cells; so that through these walls elements of the blood pass, and form deposits in the little chambers usually occupied by air. This is called the effusive stage, and is generally, at first, confined to the upper portion of the lung. Thus the breathing capacity is lessened and the respira-

tion becomes quicker, so that the diminished breathing surface may supply the usual amount of oxygen required by the system.

The *second stage* is a period of rest, during which the deposits, called tubercles, become first hard and semi-fibrous, afterwards they are infiltrated by the serum of the blood, and soften. This is, practically, a rotting process.

The *third stage* of consumption is the last, and involves the disentegration of the parts. By the breaking down, abscesses are formed which empty themselves through the mouth. It is now the life of the patient is endangered or lost.

§ 139. How does Consumption Destroy Life?

Death from consumption may result in several ways.

First. The effusion during the first stage, may occupy so much of the area of the lung that the oxygen appropriated by the residue of lung space is insufficient to support life.

Second. The dead tissue in the lung may be absorbed and carried to the blood, thus by a species of pus-poisoning it may destroy the nervous power and terminate vital action.

Third. Hæmoptysis may cause death by exhaustion.

Fourth. The sputa resulting from voiding of abscess may cause strangulation and death.

Fifth. The progress of this disease is generally very slow, and the nutritive, or blood-making, organs become gradually impaired; so that day by day the red corpuscles of the blood disappear, and this fluid is depreciated in quality until the tissues die, because they cannot find subsistence from this for merly "river of life."


FOR THE
USE OF THE
MERCANTILE
LIBRARY

CHAPTER XIV.

CONSUMPTION.—*Concluded.*

§ 140. Physical Signs.



IT may be difficult to explain them, though so certain that well-informed physicians seldom differ materially in their opinion of a given case. The means are, diagnosis by observation, auscultation, and percussion, or the science of reading lung disease by interpreting the appearance, breathing sounds, and such as can be heard by percussion, or pounding the chest walls.

When the lung is healthy, the sound elicited by striking over its surface is resonant, as though you were beating a drum. If tuberculous deposits exist beneath your blow, the sound will be flat or dead, as though you were striking a liver or beefsteak. Add to a skillful method of percussion proper instruments, and the use of an ear educated to discriminate be-

tween diseased and healthy sounds of the lungs, and a deposit in the air-cells, of even inconsiderable size, may be detected with singular certainty.

This field of observation and experience must be monopolized by the cultured men of our profession; for the mysteries and needful discernment are without the domain of the pretender and the charlatan. God will not allow the illiterate quack to contest this ground with the competent physician. Retraction of the chest walls below the collar-bone, and "dullness" on percussion over the lung, are the worst indications.

§ 141. Other Symptoms of Consumption.

These will be better understood after a statement of what are *not certain signs* of consumption.

First. Cough. This is not a reliable sign. There may exist the most obstinate cough, for weeks or years, and the lungs still be utterly free from deposits. A cough is provoked by irritation or inflammation of the throat or bronchial tubes.

The writer has seen cases of this disease in which there *was little or no cough, until the third stage.* In short, there may exist the worst cough and no consumption, or the worst consumption and no cough.

Second. Sputa. In cases where there is no light red blood, the sputa, examined by the unaided eye,

furnishes no certain sign of consumption. A patient may expectorate thick, yellow, viscid, consistent matter for weeks, months, or even years, and still no tuberculous deposit be found in the lungs. We can only infer this disease from the sputa when by the aid of a microscope we discover broken-down tissue of the lung.

Let sufferers remember this. *The most competent and skillful physician will not pretend to judge your case consumption from the general appearance of the sputa.*

Third. BLEEDING OF THE LUNGS may indicate consumption if the blood be light red and of considerable quantity; but even this is no certain sign of tuberculosis of the lungs; while dark blood is frequently cast from the lungs, and the latter possess no deposit of tubercles, and no lesion.

Fourth. PAIN IN THE CHEST is no certain sign of consumption. The lungs are largely non-sentient; though the chest walls have an abundant distribution of fibres from the sensitory nerves. In neuralgia and rheumatism, or in pleurisy, there may be severe pain in the chest; and not infrequently the last stage of consumption may come, and the patient never have complained of pain once.

§ 142. One Lung "gone," or "Half gone," etc.

Few physicians have a correct knowledge of lung

disease when they graduate; and a small proportion of them afterwards become proficient in reading diseases of the chest. Most opinions given in such cases are ignorantly gratuitous or meanly empirical. Such phrases as "You have tubercles in one lung." The spot is generally indicated. "You have an abscess as large as a walnut," or "as large as my fist." Or "*one lung is half gone*, one lung is entirely gone," etc. Each of these phrases indicate the charlatan and the impostor.

Educated, honest men, never use them to describe lung disease. A thousand to one neither of these conditions exists, and the patient live to hear it described. If you have a lung abscess as large as the first joint of your thumb, the chances are against your recovery.

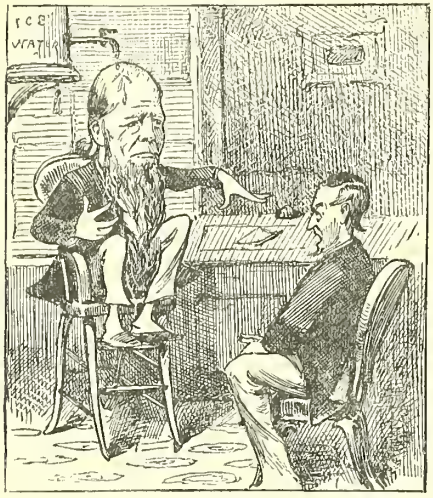
This structure may be wounded, or lung abscesses may result from chronic disease; but such cases are exceptional, and extremely rare.

Before one lung is destroyed, or you have lost a fair fraction of "*half your lung*," the chance of saving you has passed.

The writer was consulted in a case of chest disease, when he was told the following:

Mr. A., aged thirty-four years, had been suffering from bronchitis for several months. By advice of his physician, he sold his farm at a sacrifice, and with his family travelled several hundred miles to place

himself under the care of a physician who assumed to understand and treat lung disease from a large experience. After paying ten dollars consultation fee, he was told to go home immediately, that "one of his lungs was entirely gone, and the other was half gone."



DOCTOR ABNER INFORMS HIS PATIENT "ONE LUNG IS GONE, AND THE OTHER HALF GONE."

The young man wisely selected another medical adviser.

§ 143. Women's Dress Promotes Consumption.

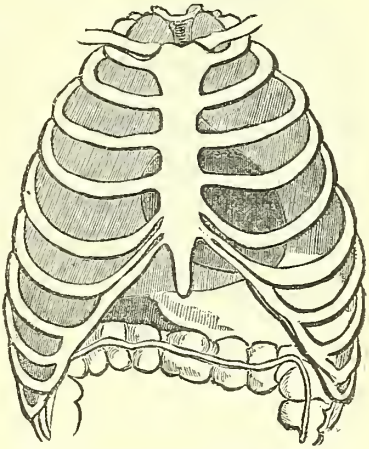
The decree of fashion is only second to that of Divine Providence. She is a brave woman who successfully contests the etiquette of the hour. This is true not only of herself, but her children.

On the coldest winter afternoon you may meet a regiment of little, bare-legged, bare-armed children on Broadway. If their fathers were to adopt a similar warmth of dress, and exposure, they would require a physician in twenty-four hours.

Fashion says, "bare-kneed babies;" and mothers have not the sense or the courage to oppose. The

"corset crusade" is so old that we shall give novelty to our page by not condemning what every sensible woman knows to be a folly and a crime. The accompanying engravings will show the difference between a natural, healthy waist, and one which has been constricted by tight dresses or corsets.

If a young lady were thoroughly educated concerning laws of health she would be ashamed to appear in public with an eighteen or twenty-inch waist. To say, "*I am naturally small-waisted*," is another way of saying, "I am diseased;" and with a true sense of the duty you owe to yourself and society, you would as willingly say, "*I am naturally a fool.*"



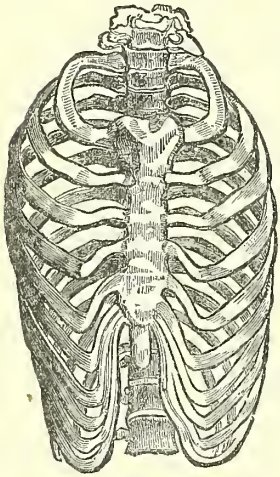
NATURAL CREST WHICH HAS NEVER BEEN CORSETED.

A man well-known in our national politics recently brought his daughter of eighteen to the writer for advice relative to her health. During the conversation he stated she was "very delicate and frail," also that a "*sixteen-inch corset was too large for her.*" No lady should be satisfied with a waist less than twenty-four inches; and where the chest measures thirty-five inches, the waist should be twenty-eight inches, at least.

The following indicates the relative proportions of a well-formed woman:

Measurement of	head	22½	inches.
"	" neck	13	"
"	" chest	32	"
"	" waist	27	"

What is considered by fashionable women "*a very loose corset*," diminishes the breathing capacity one-sixth or more. This deprivation of oxygen is a direct cause of consumption.



CHEST DEFORMED BY CORSETS.

Distribution of Clothing. This should preserve uniform temperature over the body. The arms and legs stand most in need of extra covering, as the trunk is supplied with great vascular organs which render it less liable to chill. Where there is a tendency to consumption, the upper part of the chest and arms should be particularly protected; so that no exposure would affect them more than other parts of the body.

For style and method of women's dress, the reader is referred to another part of this volume.

§ 144. Other Causes of Consumption.

First. Hereditary Taint. Individuals and fami-

lies show a tendency to consumptive diathesis, or habit of body. This may be observed in succeeding generations, as from parent to child, and, also, where both parents are free from this disease, while their children show an early predisposition to lung symptoms, and a part or all of them may die of consumption before they have arrived at manhood or womanhood.

Where, from the constitutions of the parents, or a misrelation of temperaments, or structural conditions, as between husband and wife, the children exhibit a proclivity to consumption, the deposit of tubercles may follow measles, bronchitis, or lung fever.

Children born of scrofulous parents may develop tubercles from a bad cold; and so strong is the hereditary tendency, that marriage between persons who by themselves or their families exhibit a scrofulous history should not be tolerated, as the child of such a union will be strongly predisposed to consumption.

This tendency becomes intensified when consanguinity is added to the scrofulous taint of parents.

Second. Impure Atmosphere. Dr. McCormac puts at the head of the list of consumption breeders. Clark, Laennec, and Parker ascribe a very large proportion of these cases to the same cause. Experiments on animals fully sustain these eminent men; and it may now be regarded as settled that imperfect ventilation for infants and adults is the most prolific source of this wasting disease.

Third. Idleness and eating take a respectable rank in the march of this ally of death. Whatever causes diminish the nutritive power or depress vitality produce consumption. A diet composed mostly of fats and sweets, which yield an overplus of carbonaceous elements to the blood, is favorable to tuberculous deposits. When young rabbits are thus fed, and confined in impure atmosphere without exercise, tubercles are rapidly developed and they die of consumption.

A similar cause hastens the death of many children confined to unventilated rooms, an improper diet, and little or no exercise. Consumption is a wasting process, and when the blood-making organs fail to repair the daily waste of tissue, the fatal result is only a question of time. *As exercise assists digestion, the want of it invites decay and death.*

Fourth. Among other causes productive of conditions which favor tuberculosis may be mentioned depressing mental conditions; working in dust of emery wheel; long exposure to a cold, moist atmosphere, with conditions that cause repeated colds; insufficient clothing; nursing consumptive mothers, and sleeping with and breathing the same air with victims of this disease.

§ 145. Dry Air Arrests Consumption.

Out on the "plains" the meat of the buffalo or antelope may hang out-doors, and be cured as per-

fectly as in an Eastern smokehouse. The same meat hanging along New England streams will rapidly rot. In the first instance the atmosphere is dry, and pure; in the last, moist, and so encourages putrefaction.

When a limited tuberculous deposit, or the ulceration peculiar to many cases of bronchitis is brought in contact with dry air, the tendency towards disintegration is arrested; and many cases of lung disease may be cured in Minnesota or Colorado, which would prove fatal in a less favored climate.

The curative reputation of the West, however, has hitherto depended as much upon *poor houses, thorough ventilation, and an out-door life*, as upon the *quality* of the atmosphere.

As Minnesota becomes settled, and the tight, unventilated dwellings of New York are imitated, its climate is regarded with less favor by consumptives; yet her atmosphere was never more curative than to-day. To get it you must *live out-doors and in the sunlight* when you can. If you contemplate a visit West, *thoroughly study ventilation before you start;* and *do not forget it while you live there.*

§ 146. Treatment for Consumption.

First. Improve the condition of the blood that has been impoverished by preliminary dyspepsia, which *always precedes* the tubercular deposit.

Second. Subdue the fever, arrest the cough, encourage absorption of tubercle, and by every possible means save the strength of the patient and add to it what you can.

To accomplish the above, *Hygienic management* is more important than any or all medicines can be without it; and to secure this the following rules, modified to meet the demands of special cases, will serve as a general guide:

First. Pure, fresh air of an even temperature, twenty-four hours of each day.

Second. Moderate to brisk exercise in open air every day.

Third. The patient should have a uniform dry climate, with a mean temperature of sixty to sixty-four degrees, and a range of not more than twelve to fifteen degrees.

Fourth. The chest should be thoroughly protected with several folds of flannel and one of soft leather, and the arms and legs well covered.

Fifth. Sleep from nine to fifteen hours each day.

Sixth. Little or no in-door labor; total sexual abstinence and careful cleanliness of body must be enjoined.

Seventh. A generous, nourishing diet, by one hearty and two spare meals each day; the food to consist largely of healthy meats, coarse bread, oatmeal, barley and fruits.

Eighth. Avoid a spare diet and every system of bathing which diminishes strength; for, while judicious bathing, for cleanliness or to control fever, and compresses, wisely applied, are beneficial, yet no course of *water treatment* ever cured a single case of consumption.

Ninth. Medical treatment is extremely important; and in the choice of remedies, opium, tartar emetic, the mineral acids, or aught else that impairs nutrition or renders the stomach irritable, must be avoided.

Tenth. Medication by inhalation is the proper method for local treatment of the lungs. In this way the cough may be diminished, absorption encouraged, and local healing effected. This will be shown by the changed appearance of sputa and improved respiratory power.



INHALATION FOR CONSUMPTION.

The accompanying engraving indicates the instrument the writer has used for years with gratifying results.

Eleventh. A judicious course of constructive tonic treatment is an essential part of a wise plan. The author does not include formulæ for medical treatment, because he believes an indiscriminate use of

valuable remedies does less good than harm; that only physicians can prescribe medicine wisely, and rather than take it unwisely it had better be avoided altogether.

Twelfth. Cod Liver Oil and Whiskey.—The virtue is in cod liver oil, and it is only a filthy grease at best. Its medical properties and food properties are identical.

On the fishing wharves at Portland, Maine, you can, any week-day, see large vessels containing the entire entrails of the cod, halibut, and several other kinds of fishes thrown together. In due time, if the offensive odor does not drive all hands away, this filthy mass is boiled, and then strained. The fluid is sent to the refinery, where, by a chemical process, the odor is extracted in part and the color improved. Then it is bottled, labeled "Pure Cod Liver Oil, for the Cure of Consumption," and shipped for use.

Dr. Carson, one of the most learned of living physicians, advised his students to exchange cod liver oil for cream. The latter contains all the curative properties of the former, and is more agreeable.

In consumption there is a frequent aversion to fats, and for want of these the body wastes.

Cod liver oil will frequently fatten the patient, but it is to be commended as a food, and not for any specific medical properties it is supposed to possess.

CHAPTER XV.

Concerning Sight and Hearing.

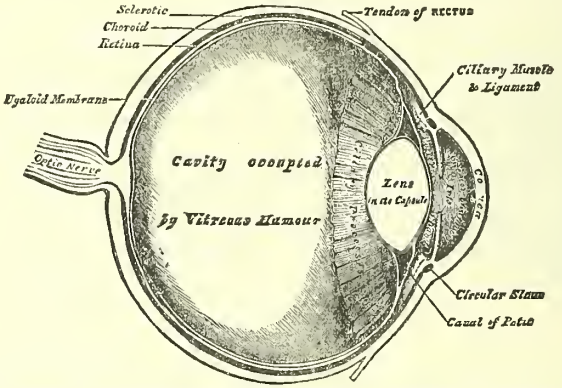
§ 147. The Eye.



IT is the broad pathway through which all objects and forms present themselves before, and impress themselves upon the soul. Other courts there are with sweet sounds and gentle touch; but this alone has statuary, colored leaves of all the seasons, books, sweet-faced friends, pictures "afire with genius," sun rising and sun setting, shapes of all things living and dead. Curtain the "windows of the soul," and see how dark is life. Poor old grandfather sits in perpetual night, until fading memory removes him from the things beautiful which gladdened early days. Death takes him from his dark prison, and new sight, new "birth," new joys and heaven are, to him, born the same hour.

Nature has been wonderfully generous to this important part of man. The home of the eye is com-

manding in position, and inclosed with strong, bony walls which protect it from accident or enemy. The genius of light works through a mysteriously constructed globe, the sides of which are strong and flexible. The frontal part of these is called a *cornea*, which is thick, strong and transparent. Behind the cornea is a beautiful muscle called the iris, which regulates the amount of light that may reach the posterior chamber. The round window of this mus-



A SECTION OF THE EYE SHOWING THE SEVERAL STRUCTURES, AND THEIR RELATION.

cle is called the pupil, which becomes smaller as the light becomes stronger. A large pupil was among Italian girls a sign of beauty, and to render this window larger they employed a drug called "deadly night-shade." This afterwards derived a new name from its use—"*bella donna*," or "beautiful lady." Its use confuses the sight; and the beauty thus secured rapidly vanishes and leaves disease in its

stead. Back of the iris is a pigment, the color of which determines the "color of the eye." Behind the pupil is the *crystalline lens*, which, by its shape, regulates the vision, as it pertains to near by or distant objects, and may be compared to the glasses in a telescope. The large posterior chamber of the eye is filled with a clear jelly called *vitreous humor*. Upon the inner coat of the wall is distributed the *optic nerve*, or nerve of sight. It alone receives the impression of the object, and is particularly involved in the disease called *amaurosis*.

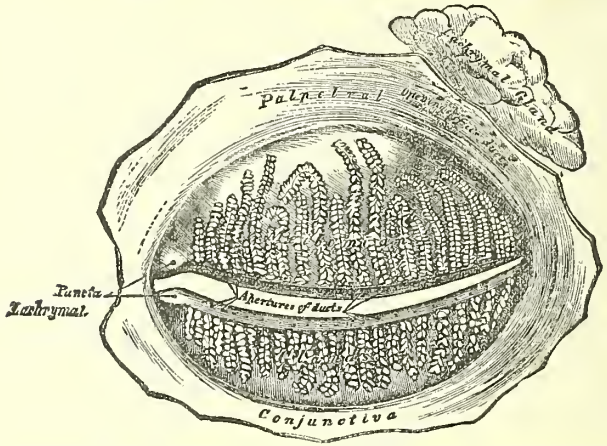
The outer structure of the eye is provided with curtains, lined by the same membrane which covers the eyeball, called conjunctiva. This is lubricated by tears, secreted by a special gland, and flowing continually to prevent friction or inflammation of the conjunctiva.

§ 148. Meibomian Glands.

These are situated in the eyelids, and open upon their edge. They furnish an oily fluid which prevents the tears from running over the lid. In appearance they resemble a "string of pearls." These are very liable to disease in scrofulous children. If only one of them becomes inflamed, it is called a "*stye*;" but when the whole are involved, it is called *tarsal ophthalmia*, which is always indicative of the state of the general health, and when neg-

lected, or improperly treated may lead to involvement of the globe of the eye, or ulceration of the cornea.

Treatment.—When the edges of the lids become thick, red, irritable or inflamed, they should be bathed frequently with warm, salted water, until thoroughly cleansed, and then simple cerate, or a



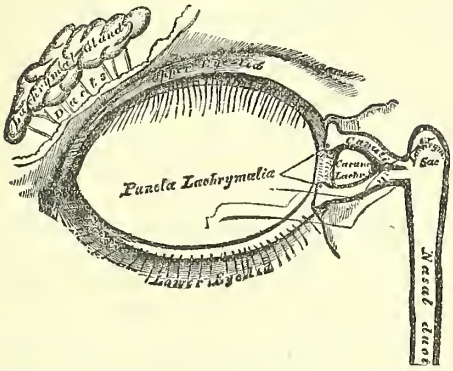
CUT SHOWING THE MEIBOMIAN GLANDS DISEASED IN "STYE," AND IN TARSAL OPHTHALMIA OR SCROFULOUS SORE EYES.

mild, absorbent ointment, applied night and morning. Alterative medical treatment, changed each week, and the strictest regard to diet and bathing perpetually enjoined, are absolutely necessary to successful treatment.

§ 149. Weeping Eye.

This is caused by a partial or complete closure of the tear duct, which commences in the "corner" of the eye and empties in the nose.

The tears are secreted by a gland situated in the upper and outer part of the eye. When the nasal duct becomes obstructed, the tears are compelled to flow over the cheek instead of taking their natural course through the nose.



SHOWING THE TEAR GLAND, AND THE PASSAGE DISEASED IN "WEEPING EYE."

Not unfrequently a fistula is formed between the nose and the internal canthus of the eye, which disfigures the face, and calls for surgical interference.

Treatment. This is a most common complication of nasal catarrh. The reader is referred to Chapter X. of this volume, where the writer has discussed its treatment at greater length. It is a condition so frequently mistreated, that one afflicted by it cannot be too careful in deciding by whom, or in what manner he will be treated.

§ 150. "Inflamed Eyes"

sometimes called *conjunctivitis*, or catarrhal ophthalmia. In acute stages the discharge from inflamed eyes coming in contact with others, frequently repeats the disease; but even then, the disease seldom

lasts long, unless the general system is in a bad condition, or the treatment is *atrociously heroic*, as is too frequently the case.

Red Eyes are short-lived, unless the stomach is deranged. The *sympathetic* nervous system, which is so abundantly supplied to the stomach, controls, likewise the blood-vessels of the eye; and the appearance of the eye depends upon the condition of the digestive organs.

Treatment. Keep the bowels *soluble* by diet, and *saline cathartics*. Studiously adhere to a simple, nutritious, "cooling" diet, composed largely of fruits and grains. Bathe frequently, and wash the eyes several times daily in tepid salted water. Put the latter in a basin and hold the eye therein, opening and closing them often. The operation is painless and pleasant. Avoid using the eyes or exposing them to a strong light. Above all else *avoid salves, ointments or eye-water* which produce pain. The common treatment for this disease is tenfold worse than the disease itself. Stimulating external washes are often very beneficial; and a weak solution of acetate of zinc externally applied, sometimes rapidly reduces local inflammation.

§ 151. Granular Eyelids.

These may be the product of any form of inflammation of the eyes, or their improper treatment, but is most frequently found among *intemperate people.*

It is a formation of fleshy granules on the lid-lining, making it rough and uneven, and causing a sensation as though sand-grains were in the eye.

TREATMENT. This should be thorough and effective. No "*Eye water*," or "Eye washes." You can get no permanent relief until the granulations are destroyed. In the hands of a skillful surgeon this means gentle, painless scarification of the granules, followed by an astringent application, and it in turn by olive oil or glycerine.

Above all else, *avoid tinkering.* "Legitimate" treatment is bad enough; but the curse of sore eyes has come largely from the abominably empirical practice of *old women, old men*, "*Indian doctors*," and "*Eye doctors.*"

After a long and extensive practice, the writer has thoughtfully adopted the following rule, *viz.*, *never make a painful application to the eye structure unless you want to destroy some substance.*

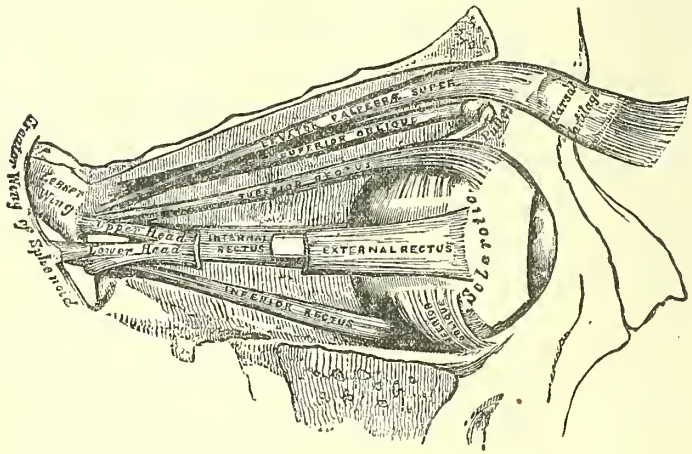
§ 152. Cataract.

This is an opacity of the crystalline lens. It may be congenital, is often the result of injury, but it is generally a companion of old age. Once commenced, it cannot be arrested by art, unless good habits of living may. The only remedy is a surgical one. Operation by needle or knife, generally the latter, is the only cure; medicine has no effect on it whatever.

The operation is generally followed by good results when the patient, before the operation, can distinguish a sunny window or a bright lamp-light. When all sense of light is gone, the operation will certainly fail. You are safe in selecting a thoroughly-educated surgeon and following his advice. In *cataract* the pupil is of "milky" color.

§ 153. Cross Eyes.

The direction and motion of the eye are determined by the use of one or more of the six muscles which have their attachment to the *sclerotic* or strong coat of the eye, a few lines back of the cornea.



SHOWING THE MUSCLES OF THE EYE WHICH ARE PARTICULARLY INVOLVED IN "CROSS EYES."

Four of these are called straight muscles, and are named *superior*, *inferior*, *interior* and *exterior*, according to their positions. The other two are *oblique*.

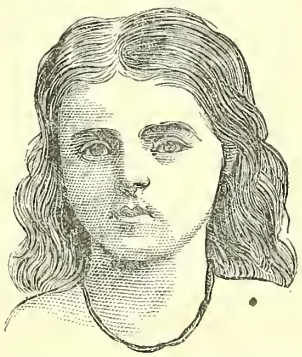
To each of these muscles are distributed nerve-

fibers, which regulate their action. If the nerve to one becomes paralyzed, the opposite and healthy muscle draws the eye to itself. When this result throws the sight of one eye across the other, it is called "cross eyes," or convergent *strabismus*. If the eye be thrown out, it is called *divergent strabismus*.

This is most liable to occur in early childhood, sometimes before birth, but it may appear at any period of life. Convulsions, irritation of *teething*, in-



MINNIE HARRINGTON BEFORE HER EYES WERE STRAIGHTENED BY DR. E.



MINNIE'S PICTURE AFTER DR. EVERETT'S OPERATION.

jury from blow or fall, or brain disease may produce it. In such cases the one eye gradually loses its power of sight, and if the eyes be not straightened the appearance of the person is permanently injured.

The operation for cross eyes furnishes the most satisfactory results of any department of eye surgery. It consists of an entire section of the stronger muscle of the crooked eye, and a careful, limited dissection of the sub-conjunctival fascia. To this add the *sub-*

junctival stitch, and a skillful operator *can set the eye in any direction he prefers.* It is a simple, safe, certain operation, and is followed by the loss of only a few drops of blood. In no degree is the sight interfered with, except to put the eye in a proper position; and then, by its after use, the sight may be increased and strengthened.

Formless fears fill the minds of the uninitiated in this matter, and fond parents often allow their child to grow up with injured appearance, diminished sight and *spoiled disposition*, because they are afraid the child may lose its sight or life in the operation. After a large practical experience of many years, the writer can assure the reader that the operation is *free from all danger*, and that in *all cases* the result can be only good if the operator understands his business.

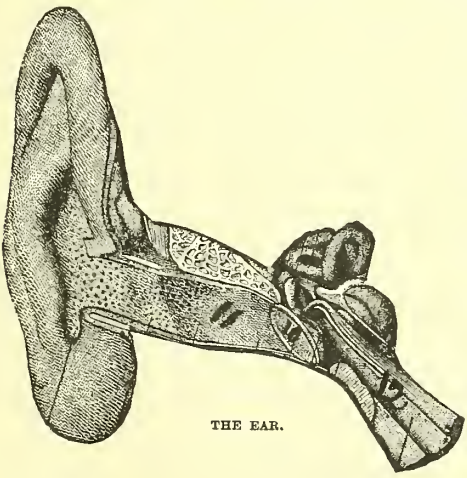
For years I have refused to make a fee unless the operation was a perfect success. The eyes can be straightened at any age, but it is always best to have it attended to early, even as early as the second or third year, and after that the earlier it is done the less the danger of losing the sight of the crooked eye.

The parent who allows his child to grow up with "crooked eyes," and the consequences which follow their possession, is committing a crime which his ignorance, fear, or after years can never atone for.

§ 154. Ear.

This is the saddest and sweetest gift of God. Through it comes warning, greeting, good news, good-by. The grand old anthems, the hymns of heaven, the bugle blast, the broken sobs, the benediction, the whisper which fades away into the night and grows stronger as we hear it to-morrow from the sky. What would this world be without voice, without music, without sound or ear to catch it? Man's is not the best. Many animals hear better than he. His is simple, but wonderful.

The outer ear is called the *pavilion*, which collects sounds that pass through the outer canal and strike the "*drum*." That is a delicate, yet tough membrane, which separates the outer from the middle ear, across which sounds travel on little ear-bones to the cochlea, or shell in which is the nerve of hearing. There the message is received and reported to the brain. The passage marked 12 connects the ear with the throat. Every time we



THE EAR.

swallow, this Eustachian tube is opened and admits of air passing to the middle chamber of the ear. If this be discontinued, or if from any reason the air is not supplied through this chamber, the sense of sound is impaired, and hearing rendered difficult.

§ 155. Deafness

Is the commonest companion of old age, and few other disabilities are so trying or inconvenient. It may be caused by old age, for which this world provides no relief. Sometimes the oil secreted by glands in the outer canal becomes hardened into wax, which causes partial deafness. In such cases the wax should be melted by warm castile soap and water, discharged from a syringe; after the wax is removed insert a few drops of pure olive oil or glycerine. In these cases there is, generally, unusual heat in that structure, which may be overcome by strict attention to the general health. When the wax is hard it is well to soften it with glycerine before using the syringe.

Thickening of the ear-drum is not an uncommon cause of deafness, especially among scrofulous persons. In such cases the treatment should be general rather than local.

Catarrhal deafness is more common than all others. This is usually preceded by symptoms of nasal catarrh, the inflammation passing from the throat

along the Eustachian tube to the ear. The symptoms are not only dullness of hearing, but noises in the head, and a profuse secretion of mucus partially or completely closing the tube. In this the deafness is always increased with renewed cold. The treatment is spoken of particularly in Chapter X., to which the reader is referred.

§ 156. Otorrhœa, or Running Ear.

This is liable to follow measles or *scarlet fever* when the patient is a scrofulous child. It is caused by inflammation of the structure of the ear, and must be arrested before the delicate parts are wasted, or the hearing becomes permanently impaired. It is not safe to *let it alone*, lest the injury done is irreparable.

The treatment is often tedious and prolonged; but not more than one case in one hundred is incurable. Dr. Gross wisely insists on the absolute necessity of a careful dietary, and a rigid observance of health rules generally. After this is regulated in every important particular, constructive tonic and alterative medicines should be used, the latter changed every week. To these are added astringent drops applied to the running ear after it has been thoroughly cleansed by warm castile soap and water at night. The drops should be used with discretion, and never without the first-mentioned part of the treatment.

§ 157. Practical Hints Concerning the Ear.

Deafness is generally the result of inflammation seated in some part of the ear structure. The first symptom of deafness should excite solicitude sufficient to inquire the cause, and remove it if possible.

All persons afflicted with deafness should avoid damp cellars, cold currents of air, and protect their ears by suitable covering.

Avoid repeated colds, as they are the parent of



METHOD OF EXAMINING EAR WITH SPECULUM AND CONCAVE MIRROR.

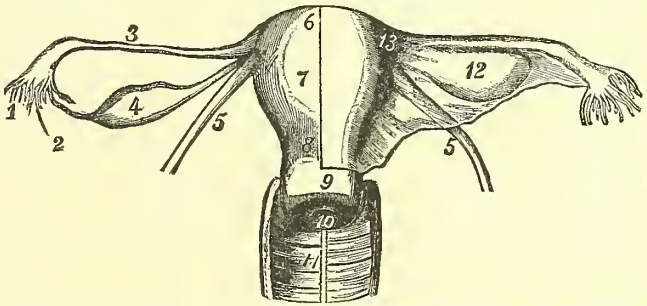
most cases of deafness. You cannot too carefully guard against so-called Aurists or *ear doctors*. Society has few members more dangerous than "*Doctors who understand and treat only the eye and ear.*"

CHAPTER XVI.

For Women.

§ 158. Menstruation.

So far as the anatomical structure is concerned, the reproductive organs of a little three-year old girl are as perfect as those of a woman at thirty-three; but they are, like the tree which has not borne fruit, functionally deficient. At about fifteen the ovaries become active. By a natural process, one of the little subdivisions of the ovary undergoes a process of suppuration and casts forth a little ovum, or egg, which is seized by



1, 3, Fallopian tube; 4, Ovary; 5, Round cord; 6, Fundus of womb; 7, Body of womb; 8, 9, Neck of womb; 10, Mouth of womb; 11, Vagina.

the extremities of the Fallopian tube, and thence conducted to the uterus.

During the development of the egg the uterus becomes congested, and by a process of extravasation its lining membrane yields a red fluid, very similar to capillary blood, and called the menstrual discharge.

This should appear every twenty-eight days; and during the time the girl should experience no pain or other sign of illness. It is a natural physiological process, and *perfectly healthy females notice the discharge as the first sign of the* "period."

§ 159. Irregular Menstruation.

Injudicious dressing, leaving the limbs exposed, want of exercise, scrofula, dyspepsia, and many other causes, enfeeble the condition of girls so that the "period" is ushered in with pain or caprice. Sometimes there is an absence or suppression of the menses for weeks or months; at other times, by a relaxed condition of the uterus, or lack of muscular or nervous tone, as pertaining to her general structure, the discharges are profuse, even alarmingly so.

These symptoms do not, generally, indicate any special disease of the reproductive organs, but are a warning that attention to the general health as to diet, dress, exercise and bathing are necessary. When these first appear, a wise regard for health rules will remove the cause and restore the lost health.

When the discharge is profuse, a quiet, recumbent position, and twenty drops of laudanum, repeated every half hour until its influence is felt, will usually prove a simple and efficient corrective.

§ 160. Pain at Period.

Dysmenorrhœa is one of the chief sources of female suffering. It is common to the single and the married. Its immediate cause is congestion of the womb. There can be no pain without an overfullness of the uterine vessels. This congestion may be referred to

a "neuralgic" or rheumatic condition of the womb, or to an inflammation of the cervix or neck, which prevents the menstrual fluid from flowing into the vagina.

It is one of the old standing disorders that has baffled "old ladies" and old doctors. Warm drinks and warm foot-baths answer for simple cases; but in severer cases the following rule will be found more efficient: At first indication of pain at menses, take a sitz-bath of water, as *hot* as you can endure it, for five minutes, a *hot* foot-bath at the same time; then go to bed, cover warm, apply hot cloths over abdomen, and hot bricks to feet. Thus rest for two hours; then avoid exposure to cold.

In others, preceded by ulceration and a stricture of the passage leading to the body of the womb, a *sponge tent* may be inserted to advantage. This can only be done by a skillful hand, and, fortunately, is seldom needed.

The frequent method of treating this condition by local instrumental appliances is a product of the ignorance, weakness, and licentiousness of medical practice. It is approved by some good men in the profession, but the writer has for years been satisfied that it is seldom necessary.

Our space is too limited here to discuss this disease or its treatment at length; but I would suggest the necessity of frequent hip-baths and vaginal injections of tepid water; also of a regard for best conditions of skin, bowels, and digestive organs.

§ 161. Ulceration of Womb.

This is generally preceded by pain at period.

Ulceration is a *product of inflammation*, and where congestion of the body or neck of the womb exists for a protracted period it generally develops an ulcerated surface. This, however, is as simple as an ulcer on the finger, and should be treated upon the same principles. A vaginal injection of a quart of salted water, two or three times daily, with sitz-baths and absence of all sexual excitement, is in the right direction. In obstinate cases a local application will hasten a cure; but when necessary its full benefit may be secured by a remedy suited to the case, applied by the patient's own hand, in the shape of cotton saturated with the remedial agent.

The process of cauterization in common vogue cannot be too severely condemned. Here, also, must every possible attention be paid to the general health.

§ 162. Leucorrhœa,

commonly called "Whites," from the appearance of the discharge. In most cases it is simply *catarrh of the vagina.* Sometimes the condition pertains to the lining membrane of the womb, when it is called Uterine Leucorrhœa. This symptom frequently depends upon excessive sexual congress, dyspepsia, atony of the nervous or muscular system, and constipation.

Treatment. Constructive tonics, thorough hygiene as applied to dress, diet and exercise, hip-baths and frequent injections of tepid salt water, with a removal of any other provoking cause that may exist, will seldom fail to bring good results.

In Uterine Leucorrhœa, a medicated application

with saturated cotton not only hastens a cure, but renders it more certain.

§ 163. Pruritus.

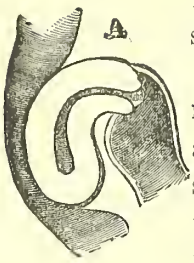
Itching of the outer and inner labia is an annoying symptom. It is most frequently the result of untidy habits and an acrid vaginal discharge. In some cases the condition resembles salt rheum.

Treatment. Vaginal injections of tepid salt water, frequent cleansing of the parts with Castile soap and water, and the following formula: Carbolic acid, twenty drops; alcohol, four drams; chloroform, one dram; water sufficient for six ounces mixture. Apply for obstinate itching.

§ 164. Falling Womb.

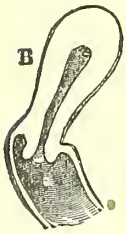
Caused by a plethoric or congested condition of the womb (hence in many patients the symptoms are increased at time of period), by a relaxation of the parts which support the womb, by a relaxed condition of the abdominal walls, and, *more than all else, by the habit of suspending clothing from the loins*, and by corsets.

In descending, the womb frequently assumes a lateral, anterior, or posterior tendency, sometimes folding upon itself, as the accompanying cuts indicate. These complicated misplacements are generally characterized by an aggravation of the usual symptoms—of a dragging sensation in the groin, pain on inner side of thighs, and in the back, pressure in

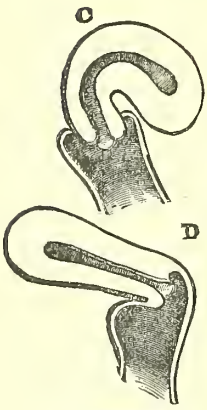


lower pelvis, and disinclination to stand.

Treatment. In each case the cause must be discovered and removed,—all clothing suspended from the shoulders, hip-baths, and cool astringent injections frequently applied. In every case prolapsed bowels accompany a prolapsed womb; hence an external supporter which helps to preserve the natural position of the bowels is good.



Pessaries, as a rule, do more harm than good; but in extreme cases they are serviceable.



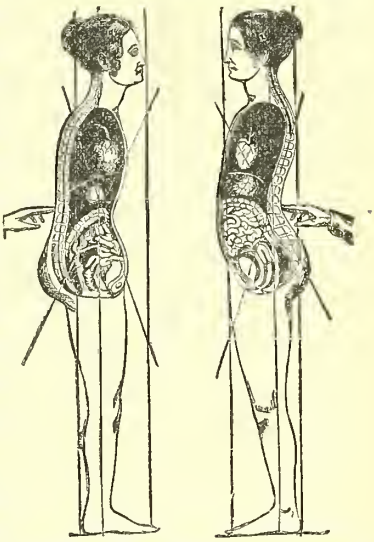
A. Retroflexion.
D. Retroversion.
C. Anteflexion.
B. Anteversion.

§ 165. Of Parentage.

Hannah represents a type of the divinest in woman. Her intense sorrow because she was barren; her prayer, followed by her great joy and sincere thankfulness when she became a mother, are as natural as simply told. *Mother* is the only sacred word in all languages. To prince or pirate, in giddy youth or gray old age, among all peoples and in all climes, *the term mother is sainted. I never knew a man to swear by his mother.*

Before the child is born his destiny has been

largely determined. It is but the product of the father and mother,—their health, disease, their temper, tone, culture; not only all they were, but all they wished to be and were at the moment of conception, that was the thing begotten. Then the mother and God do the rest. Every wish, thought, word, has its effect on the offspring. Every mouthful of bread goes to form the blood and brain and bone through which that little soul must climb to Heaven or sink to Hades.



These figures show the difference between relaxed and tense abdominal walls. In the former, all the organs of the abdomen are prolapsed. (*See p.* 235.)

How needful, then, that she say, intelligently, whether she will have a *Samuel* or an *Ishmael!* During pregnancy she should have rest, recreation, books, attention, care; in short, she should have as much of a foretaste of Heaven as this world affords in nine months.

Should she even dream of abortion? Yes, if she wants her child to be a murderer, as she is in her heart.

What shall be the limit of sexual congress during the period of gestation? The same as it should be with any other perfectly healthy animal, *none at all.* The precocious licentiousness of childhood can only be explained by the excessive sexuality of parents before children are born. As passion, anger and

cruelty may repeat itself in your offspring, so will temperance, truth, charity, reverence and prayer.

Do you want help to reproduce your best? Then I will give you some wholesome advice which will render childbirth a luxury. We will assume that you and your husband are healthy and harmonious; also, that you have, in your best mood, thoughtfully and religiously undertaken your task. We will then write for you a few simple rules:

First. Study to be not only contented but cheerful. Keep your heart full of song.

Second. Eight months before your child is born adopt a system of morning walks and regular bathing. Every other morning, at least, take a general bath in water cooler than the body, followed by thorough friction with a soft towel.

Third. Six mornings of the week take a hip-bath of water as cool as you can with comfort, and as often take a vaginal injection with at least a quart of water.

Fourth. Eat little or no flesh, fish or fowl, and abstain during the last four months from bread or meal which contains the hull of the grain. Let your diet during the last half of pregnancy be of rice and fruit chiefly. By using nothing which has phosphate of lime to harden the skeleton of the child, he will be born with bones so soft that you can tie them in a knot. In this condition the child's head and other parts will so accommodate themselves to the strait through which they must pass, that the mother will have, not a *painless* labor, but one so comfortable as only to remind her that we are all born in *travail* to a world where roses are abundant and their

fragrance measured only by our grace and good nature.

Fifth. That is all. Now that the baby is born, and your arms are full of joy, as I see the tint returning to your cheeks I am reminded that your physician is almost an intruder. And so g-o-o-d-b-y-e.



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CHAPTER XVII.

Concerning Men.

§ 166. How Medical Respectability relates Itself to the Dangers and Indiscretions of Youth.

WHEN I received my Medical Diploma from the *Old University of Pennsylvania*, I had never during the entire years allotted to undergraduates heard a lecture on the use or abuse of the reproductive organs. I was clothed with their highest authority to teach and practice the healing art; but they sent me forth utterly ignorant of the true *use*, and more fearfully common *abuse* of the sex power. Then, when a young man came to me with weary loins, sweaty feet, wasted memory, lost concentrative power, despondent, tired of life, victims of "*wet dreams*," with dull, glassy eyes, pimpled face, ringing ears, and clammy hands, and prayed me for relief, my revered teachers told me his disease was *imaginary*, a sort of male *hysteria*.

When I sought his history, and was told by him that *onanism* had wasted his powers and prospects, I went again to my teachers and they told me to "advise him to marry," and give him tonics.

When years had made me wiser than to seek to

"draw water from a dry pump," I strongly suspected my teachers had learned too little of the *Curative art*, and that my young patients had "learned too much" of their sexual nature, and had fatally practiced what they knew to their own destruction. In years after, when I was lecturing in St. Louis, a young man of twenty-eight years, related to one of the first families, consulted me relative to tertiary syphilis of three years' standing. His story was a short one. "I was troubled with frequent emissions, and went for treatment to Surgeon ——, who gave me medicine, and recommended illicit intercourse at regular intervals. In six weeks I had this disease, and you see the result." The surgeon referred to was at the head of the medical and surgical fraternity in that large city. The young man strictly followed his advice, and had added to his maladies a loathsome disease, which must clothe his whole life like a shirt of Nemesis.

The larger proportion of young men have practiced and suffer the results of onanism; and medical men neither feel their needs, nor are they capable of meeting them. The greater proportion of respectable men, of which Dr. Chambers is an honorable representative, totally ignore the existence of, and results from self-pollution. Another class treat the whole affair lightly, having no deep convictions any way. Still another class, of which Drs. Carpenter and Acton are good samples, acknowledge the sin, and the need of a remedy.

All, however, heartily join in condemning the men who reap a rich harvest in advertising to cure "Lost Manhood," etc.

Society is infested by a class of *medical pirates*, whose *ignorance* of *the healing art* and *lack of honesty* are their chief professional investment. These appeal to the army of sexual sufferers, and manage to get large sums of money from those whose pride would prevent an exposure of the wrong done. In my mind these *medical shysters* and pirates on the high seas are equally respectable. Still the facts remain. *Society suffers from the inefficiency of physicians. These medical scoundrels could not ply their vocation a month if the legitimate physicians did their whole duty.* The common "*Private disease doctor*," is not half so great an *enemy to good society as the St. Louis surgeon*, above referred to. Shame on the medical men who waste their ammunition on the "quack system," when three-fourths of our entire profession are so delinquent in their duty to society that our acts of omission work a tenfold greater wrong than the robbery actually perpetrated by the quacks. Why should young men neglect the latter while we neither understand their conditions, nor invite their confidence.

§ 167. Semen—What it is, and Does.

This generative fluid is highly organized and subserves a most important purpose in the divine economy concerning man. It is secreted by the testes from the pubescent period until very advanced age, even to eighty or ninety years. Its appropriation is like its secretion, constant as the beating of the heart. Its use, aside from reproduction, is not clearly demonstrated; but it would seem to consti-

tute a super-vitalizing food for the nervous system. At least, the nervous tone holds a direct ratio to its production and absorption. Castration invariably deprives the person thus mutilated of a strength, clearness, aroma, or other power which can only be dispensed with at a sacrifice. The function of semen, either by its production taking from the blood that which would, if left, obstruct the most exalted physical or mental expression, or by furnishing pabulum to the blood, by which the above exalted action is more liable to occur, is to provide a more powerful expression of soul and body. Hence, *sex power* gives zest to reason, efficacy to prayer, clearness to intellect, loftiness to pride, energy to labor, and a personality to its possessor which is never found with wasted virility. As a rule, men who are heard by the million are *thoroughly sexed.* It means *power*—the divinest gift pertaining to earthly existence. He who can use great sex power wisely is richer than houses and lands and ships and gold and silver can make him.

§ 168. Wise Use of a Great Gift.

The Cardinal Maury said to Portal, "A man of sense past fifty ought to give up the pleasures of love, for every time he indulged in them he threw on his head—or coffin—a handful of earth." When on his death-bed, Newton told Dr. Brown "*he had never lost a single drop of his seminal fluid in all his life.*"

When Cicero was asked if he still indulged in the pleasures of love, he answered, "*Heaven forbid! I*

have forsworn it as I would a savage and a furious monster." These were men who made the most of this life and themselves.

In youth the boy needs every drop of this fluid to secure that culture and training of his powers, the use of which must determine his *status* in this life, if it does not in the world to come.

In his maturity, nature requires a sufficient expenditure to secure a following generation. If a man expends greatly beyond this, he kills "the hen which lays the golden egg;" then nature writes *debauchee* upon him, even though his excessive *venery* has been confined to his own marriage-bed, and disfigures his face, so that he is unfit for all society, save that whose breath is pollution. Men of advanced years *cannot afford to waste* themselves sexually; and the world can poorly afford a place for their children begotten in a decrepitude which is ever punished if found in the bridal-chamber.

§ 169. The Law of Sexual Congress.

"It is always wrong," say some, "except for reproductive purposes only." The strongest reason for rejecting the proposition is derived from the fact that, probably, no *healthy* man or woman who ever taught it, would live it if they submitted to the dignified relations of a sound, sensible marriage. Moral platitudes and sentimental clap-traps are too common nowadays.

A law, to be worth anything, must be measurably practical. This world would have been good long

ago if the truisms of old maids and men, and the effusions of young girls and sophomorical boys could be substituted for the old-fashioned decrees of Providence.

I cannot give a law regulating *venery*, stating frequency, occasion, etc., etc. Social science speaks with authority; but as yet her mandates cannot be squared with the cheap philosophy which supports promiscuous intercourse; and her behests are a fearful protest against the terrible lust which people practice simply because they are husband and wife. This we do know, however, sex principle is the great source of executive ability in any direction, moral, intellectual, or physical. To preserve it, hoard yet wisely use it, is what we must need to know and do. Independent of the wrong done to society by sexual excess, no man or woman can afford to waste themselves sexually. Sexual excess will unfit you for any and every good work and way. Then, if you would be clean, strong, or influential, save your sex power. This applies to every age, sex, and condition. Let it be distinctly understood, that every act of venery is, *by its very nature, weakening*. When this is accepted, five-sixths of sexual wrong will cease. From this we draw the strongest reasons for living a *pure life*. Recently my religious friend severely censured a third person for social immorality, and in the same breath admitted tenfold the sexual excess, as applied to his own wedded life. The latter he justified, as both moral and scriptural. Oh, ye "whited sepulchres!" Verily, *virtue hath its own reward.*

§ 170. Symptoms of Sexual Excess.

These cover all years from fourteen to forty years, even more. Lallemand, Acton, and Jean Jacques Rousseau have about completed their description: "Haggard features, thin, pale, and irritable. Dizziness, despondency, nervousness, dyspepsia, constipation, weak back, clammy hands and sweaty feet, pimples on the face, a glassy expression of the eye, wasted memory, erections, emissions, mucous or seminal discharges at stool, or during micturition, sexual excitability, and overhasty orgasm." These and countless others. They are not alike in any given case; and the symptoms are as common to married life as boyhood, and more frequently found between twenty-two and thirty-five, than earlier. For it must be understood that where onanism is moderately practiced these symptoms are mildly presented, if at all. Usually after eighteen, the victim ceases his vile habits, while the results follow him into manhood, and mar the poor



THE OFFSPRING OF SENILITY AND NERVOUS DECAY.

children begotten by him, unless, as is often the case, dementation, insanity, or suicide claims its victim before the marriage-chamber is polluted.

§ 171. Secret Vice.

Dr. Acton says, "There is too much reason to fear that this *scourge of our youth* prevails to an extent which will not be known with any certainty till years hence they are seeking medical relief, too often, alas! in vain." Yet the same author wades through pages to show why the teacher, or father, or mother, or physician, or somebody else should warn the poor boy in time to save him!



THE OFFSPRING OF PURE AND VIGOROUS PARENTAGE.

Prof. C., a teacher of State reputation, and one of the grandest men in Cincinnati, said to the writer, "If one of my scholars grows pale, or careless of study, or listless, or allows pimples to appear on his face (he gave many other signs), I invite him to my room and instruct him in a virtuous knowledge of his sexual nature." He but performed a Christian duty.

After many years as lecturer and practitioner, embracing a large acquaintance among teachers, students, clergymen, and business men generally, I have a painful conviction that many *more than three-fourths of the American youth* suffer from the terrible habit of sexual abuse. Dr. Workman, in a report of the Toronto Lunatic Asylum, says, "There is one cause of a physical form, but which I almost dread to mention, which appears peopling our asylum with a loathsome, abject, and hopeless multitude of inmates. * * The result has been frightful. I hesitate to state the proportion in which—I feel fully assured or morally certain—*secret vice* is present. * * In hardly any instance is it found that parents have any suspicion of its existence when they place the victims in the asylum."

I have never talked with a wise superintendent of an asylum, school or college, that did not recognize *secret vice* as a source of countless failures and ruined youth. Its victims are generally the clearest intellects from the best families. The boys of a lower or coarser nervous texture are less likely to become its slaves; and parents, too pure and proud to become suspicious of their child, see him grow pale and waste, while the less gifted boy has passed the shoals of youth safely.

§ 172. Spermatorrhœa.

This means involuntary loss of seminal fluid. It may occur as nocturnal emissions, discharges with urine or at stool, or a drooling from the penis, with signs of occasional moisture.

Causes. Inflammation of the reproductive organs from *private disease*, masturbation, sexual excess, and a hereditary sensitiveness or excitability of the private parts. The results of a sexually vicious life are visited on the children as well as on the parents who indulged them. From a careful professional observation, I am convinced that few children of a lecherous or over-sexual parentage are free from super-sexual sensations. This may show itself in infancy, when only the strictest care will prevent the formation of secret habits of vice.

Physicians widely differ as to its prevalence, some claiming that it does not exist, that there is no such disease. Others, better informed, admit its prevalence, but they think it is greatly exaggerated as to its prevalence and severity of symptoms. Still another class treat all forms of nervous exhaustion under the title of spermatorrhœa.

The second class are nearest the truth; but even *they* have overlooked a most important feature of the subject. The name is liable to mislead. A loss of seed is often not present, and therefore does not belong to the case, while there is in all these cases derangement of the reproductive apparatus which claims serious attention. In the latter case many physicians stumble. The patient is convinced of a weakness which the physician says does not exist, and he is forced to accept the services of another who admits the sexual disease, though he may misname or mistreat it.

The conditions referred to may be explained under the following title:

§ 173. Sexual Weakness, with Excess and Waste of Semen, or Deficiency of the Semen.

Where excess and involuntary waste of seed exist, the term *spermatorrhœa* applies. Here, however, the difficulty is not simply waste of seed, but a set of low nervous conditions, brought on by causes long since past. With involuntary waste is generally present a lack of quality of semen, depending upon the debilitated condition of the nervous system, and particularly of that part distributed to the reproductive organs. The desired object is not simply to save the seed "manufactured," but to *improve the strength of the parts*, so the seed produced shall be such as the system requires. To *secure good seed and keep it* is the whole object of the remedial effort.

Deficiency of Semen. In cases where there is no involuntary waste there is always a pre-sexual history to confirm the patient in his sexual anxieties. Physicians are very liable to suppose the patient has been imposed upon by some quack, or by his own fears; but the fact is, the victim is nearer the truth than the doctor. The former knows the history of *private disease* or *secret vice* which preceded his present symptoms of debility. The indulgence, emissions, "wet dreams," and gradually lessening discharges, until they have disappeared altogether, while the self-consciousness, despondency, wasting memory and other symptoms have as gradually increased. For many years and during an extensive general practice I have carefully considered this class of cases, and I am strong in my convictions that the sins and sufferings of sexuality *are not half told*, and that the true

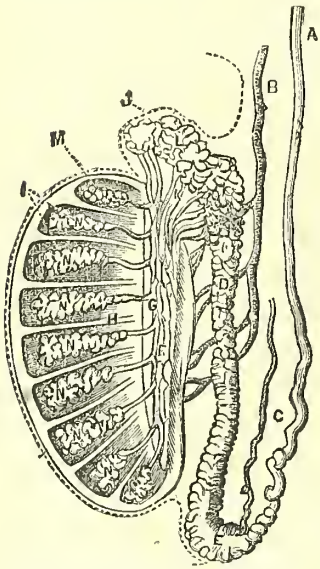
physician has more to learn than has hitherto been taught concerning this subject.

When we consider, as stated elsewhere, the support to the nervous system provided through the absorption of healthy semen; when we compare the entire horse with the gelding, and see how the former is toned, tempered and strengthened by the product of his testes, in which alone he differs from the gelding, we need not wonder at the weakness or worthlessness of a mind or body prostrated by marital excess or secret vice. The man is much like the castrated horse, and grows anxious when he is compared with his former self. He has watched the departing freshness of his face, and knows his mind is robbed of its royalty. His features have grown haggard, his eye glazed, his hand disgustingly clammy, his venery spasmodic, irritable, incomplete, his hopes gone, his business capacity diminished. Do you wonder he is willing to believe the fault lies with his reproductive organs? It is not these alone; but there is a debility that should not exist, and it is folly to fight the facts, his history, and his faith.

§ 174. Is Virility a Burden or a Weakness?

The *testes* are a bundle of vessels which possess an immense secreting surface. Here is selected from the blood a fluid inhabited by spermatozoa, which manifest much activity, and attest the vital exellence of the semen. This fluid is carried to the seminal vesicles, situated in the lower and back part of the bladder, from which it is absorbed for super-vitalizing purposes, or ejected into the urethra, and thence

lost to the system. Its involuntary loss is *always unnatural.* A healthy man may experience such a loss; but indigestion, dreams, or voluptuous mental postures will explain it, and these are accidental. The experience of Sir Isaac Newton, as well as observations of healthy male animals among horses and cattle, illustrate the correct view of seminal disposition. In this important department, surely man is not less protected in his *healthy condition* than the beast?



VERTICAL SECTION OF THE TESTES.

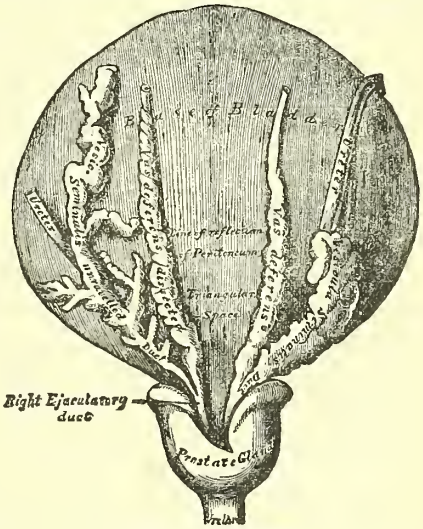
A. Vas Deferens; B. Spermatic Artery; C. Vas Aberrans; D. Body of Epididymis; E. Globus Minor; F. Rete Testis; G. Mediastinum; H. Vasa Recta; I. Tunica Vaginalis; K. Vasa Efferentia; L. Globus Major; M. Tunica Albuginea.

Even the pure-minded Acton is led to a plaintive admission of the sufferings of healthy young men, who are *determined to be continent* at whatever expense, and thus innocently, as a man of science, he indorses the maudlin sexual sentiments of Michelet, who declared the male to be a "*fierce animal.*"

Entire horses are quiet and easily managed, until their continence is debauched; then they become wild until sexually satiated. So young men, by an inherited super-sexual inclination, or by means of obscene thoughts or literature, or unchaste practices, may meet sexual temptations difficult to resist; but a young man of chaste parentage, and a per-

fectly pure life, will have no difficulty in controlling his sex nature until it may be lawfully exercised.

Even in married life this super-sexual apology largely obtains among pure men, and those who would not *knowingly* do a wrong, insist upon sexual congress, when to consummate it causes sacrifice of inclination and health on the part of their companions. The reason is explained by an overfullness of the seminal vesicles behind the bladder, as indicated by accompanying cut, and consequent uneasiness. It is called *seminal plethora;* and the sexual desire thus provoked, as well as the experience of relief after coition only proves, as Acton justly observes, the fact of past indiscretions. These conditions exist in an almost insane degree among the Cubans, and a friend of the writer, who has lived among and studied that strange people for years, says: "Masturbation, sexual precocity, sexual indulgence, and impotency at about thirty characterize the lives of most male Cubans." Abnormal conditions of the reproductive organs are so common that we must hesitate ere we declare a sexual law from inclination or experience.



BASE OF THE BLADDER.

Very frequent desire, rapid, or frequent, or delayed, or unsatisfactory orgasms are evidence of unnatural conditions. Emissions after a week or a month of continence are unnatural. Venery is at no time *essential to health*, and in all debilitated conditions should be exercised with the greatest care. Men of large brains, or a preponderance of the nervous temperament, must hoard their sex power as the miser does his gold. At the head of all the virtues stands *continence*. Lose it and others are liable to slip away unnoticed.

§ 175. How Sexual Debility may be Succesfully Treated.

1. Where its predisposition is strong from unchaste parentage, the earliest attention to cleanliness, hip bathing, an unstimulating diet, and avoidance of impure practices and literature, should be carefully and continually enjoined.

2. *Masturbation*, where it has not been long practiced, and when not accompanied by "wet dreams," an utter abandonment of the habit, with frequent cool hip-baths and other washing of the parts, will be sufficient.

3. *Debility with emissions.* These may be limited as to time and quantity, or frequent and profuse. Encourage muscular exercise, even to weariness. Partake of a generous, nourishing, and unstimulating diet. Avoid tobacco, coffee, and liquors of all descriptions. Always retire with an empty stomach. Sleep on the side, and get out of bed as soon as you awake in the morning. Take three to six cool hip-

baths per week before retiring. You will probably need constructive medical tonics, and local treatment of an astringent character; but the latter cannot be a part of self-treatment, and your general conditions must be known by the physician who prescribes before he can meet the demands of the case.

4. *Sexual debility, with drooling, scanty, or no emissions.* These are still more difficult. The parts have not only lost the power to retain, but to create the seed. It is not simply spermatorrhœa, but a devitalized functional condition, which must be overcome, or ill health permanently endured. The rules adapted to self-treatment under No. 3 apply with increased force here. In all these cases sexual excitement, from whatever cause, is to be carefully avoided. The constructive medical treatment required in all these cases I cannot give. Inefficient treatment discourages the patient, and does him no good. From years of experience, I am satisfied that these cases are perfectly amenable to judicious treatment, but that they require a care, skill, and knowledge which cannot be imparted to or carried out by the patient himself. The writer has cheerfully placed the hygienic or water-cure treatment for these debilities before his reader in that part of this section marked No. 3; but he is well aware that the worser cases of sexual debility are never treated successfully without more than mere hygiene. Much more might be told, but I have long passed the limit of pages allotted to me in this volume. The attention of the reader is invited to a volume I hope to find time to write on these topics ere I grow much older, or to

my public lectures during the winter months. If a tithe of the good purposes which I have tried to plant in preceding pages take root with the reader, I may safely retire here and now.





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This book was not written to advertise or secure practice. Each subject is treated wholesomely and with a desire to benefit the reader. If you have read three pages you must see they were written to benefit you, and not to attract your attention to a specialty or a nostrum.

Yet there are those who would like to see me after reading this book. I shall be happy to advise you. My office hours are from 10 A. M. to 2 P. M.

From October until May, I shall be engaged in lecturing in the principal cities. If not convenient for you to see me at my office, I may assist you by correspondence. If you apply by letter, state name, age, sex, occupation, digestion, condition of nose, throat, chest, and such other symptoms as seem important. If a fuller statement is required, I will send you a series of questions to answer, after which I can tell you what is best for you to do. Enclose stamp if you expect a reply.

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PART II.

EMBRACING

DRESS, HEREDITY, CHILD-TRAINING, KITCHEN AND DINING-ROOM ETHICS.

BY

SUSAN EVERETT, M. D.,
SANITARY LECTURER TO WOMEN.



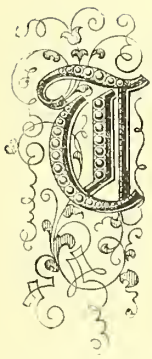
"We are strongest in spontaneous moods, and by contenting ourselves with obedience, we become divine."

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PART II.

CHAPTER I.

DRESS.



THE dress of women as now arranged, is more productive of uterine disease than all other causes combined.

To a sympathetic beholder the very sight of a woman, in her ordinary street-dress, is fatiguing. The long, heavily-trimmed skirt, the long waist tightly belted, the peculiar *deformity of back* which is seen in more than three-quarters of the corseted women and girls found in our streets and houses, country or city, are sources of anguish to any human being, who through reason or imagination can see below the surface of things.

Most women experience the disastrous results of our ordinary dress, but are unequal to finding a door of escape from them.

It is proposed to briefly state three principles, which, if attended to, will eventually lead us "into green pastures and beside still waters."

2. The three corner-stones upon which must "hang all the law and the prophets" in respect of the dress question, are:

First. Every ounce of clothing must, literally, hang from the shoulders.

Second. The waist must be so large that upon taking a deep

inspiration the fingers may be easily passed between the dress and person at the belt, directly below the armpit.

Fig. 1.



A FEMALE FIGURE DISTORTED BY DRESS.

Third. The clothing must be so equally distributed that the tops of the shoulders and chest, the arms to the wrists, and the part from the knee to the heel may be clad as warmly as the rest of the body.

These principles, ingeniously embodied in practice, give an enviable freedom of movement and ease of carriage that can never be approached by the movements of a body swathed and hampered by a mass of clothing about the loins.

3. The best Material for Underclothing is, undoubtedly, a combination of woolen and canton flannel garments. Canton flannel (the heavy unbleached English quality), has advantages in the way of washing, which commend it over all other fabrics, for underwear. The chief objections to wool flannel are its *unwashableness* and its *ugliness.*

However, for the comfort of the over-fastidious, it may be said, the last of the chief objections is obviated in the plan recommended by the writer, since it is entirely hidden by the oversuit of canton flannel.

4. How many Undergarments should be worn in Cold Weather?—It is necessary to ask and answer this question, lest the facts in the case be misunderstood.

From the 1st of November until the 1st of May, THREE SUITS OF THE "COMBINATION GARMENTS" *should be worn.*

First. A full suit of wool flannel from neck to heels and wrists.

Second. A full suit of heavy, unbleached English canton flannel, entirely covering the suit of wool flannel, or first suit.

Third. A light suit of pretty muslin extending to knee and wrist, as indicated by Fig. No. 2. If over all these a lady desires to adorn herself by an exquisite chemise, which buttons in front from top to bottom, there is no objection to her doing so. She will be neither warmer nor colder by the addition.

5. The Chemise is simply an ornamental garment, and may be put on or off according to the taste of the wearer. Its weight is no objection, coming as it does from the shoulders, while its not ungraceful drapery may reconcile the wearer to underlying flannel and common sense.

Nature often leaves traces of *pre-barbaric* states, as it were, to remind us of advancement. May not the chemise be regarded as the vanishing point of a savage's blanket, in all its stages of arm-holes, gathering-string, Roman toga, etc.?

6. Shall Drawers be closed over the Body?— Drawers should be closed over the body and below the knee. The sense of protection and modesty which the wearers of the "*combination*" style of underclothing (see Fig. 2) imparts, might be fairly reckoned as therapeutic, if, as a recent scientist argues, a wholesome moral state reacts beneficially upon the physical state.

From long observation, and from a frequent comparison of views among cultivated women, the writer is convinced that the female body should be robed with *perfect personal security.* Colds from standing in draughts of air, and various unavoidable exposures, are thereby obviated. There is no scientific basis for the sentimental considerations which induce some *male* and *female* physicians to commend open undergarments for women, while there is every reason suggested by comfort and delicacy for insisting that *undergarments must be closed.*

I know of no more pitiable object than a woman draped in "curtain drawers," flying skirts, and flimsy gaiters, battling with a raw March wind! I have often had the instinctive feeling that I would like to clasp the ruffled and disturbed drapery closely about its wearer's knees, lest the cold wind should touch her shrinking body.

But with alternate layers of the neatly-fashioned wool and

Fig. 2.



FIGURE DRESSED IN MRS. EVERETT'S COMBINATION GARMENTS.*

* Patterns for Mrs. Everett's "*Combination Garments,*" with full descriptive cuts, and directions, by which an ordinary seamstress can put them together, without difficulty, will be sent to any address, on receipt of one dollar. Address, SUSAN EVERETT, M. D., P. O. Box, 1812, New York City.

canton flannel armor extending beneath the hose to boot-heel, and beneath the muslin outside "Combination Garment" (see Fig. 2), to neck and wrists, a lady may fairly defy the elements upon the coldest winter day. And with the addition of long-legged rubber boots, herself or daughters may safely enjoy their "constitutional" walk upon the sloppiest day.

7. What kind of Skirts should be Worn?—It is first needful to state what kind of skirts should NOT be worn.

No balmoral, felt, flannel, or quilted skirt should be worn. Balmoral and felt are too heavy for those who prize sound backs, sides, and an undisturbed uterus.

Flannel skirts are not needed. In the style of clothing here recommended it has been my object to *avoid skirts* just so far as practicable. The warm, close-fitting "COMBINATION GARMENTS" will be found to do away with the old-fashioned "flannel petticoats" which, unfortunately, our mothers clung to so tenaciously, and for the wearing of which, buttoned tightly over kidneys and bowels, many of us, to-day, are suffering. As for a quilted skirt, I confess to an immediate lowering of respect for a woman who wears one. Its liable, and I may add *probable* uncleanliness after the first two months of wear, are sufficient to consign it to oblivion. What shall be said, then, of its condition after being worn twelve months! Let a lady try to wear a white skirt, without washing, for six or twelve months, and

Fig. 3.



SUSPENDERS AND SKIRT ATTACHED.

note its condition, before she invests in one of Stewart's quilted skirts. Too often the *indescribable, insufferable,* if not diabolical *odors* which so often salute the sensitive nostril, come from clothing too long worn.

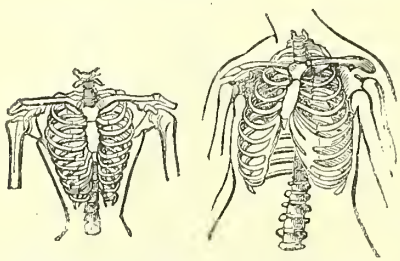
So we condemn the quilted skirt because of its inevitable *uncleanliness,* though its weight and heat about the loins would, otherwise, be a sufficient objection.

A skirt made of washable material is the best. It should be gored at the top, and supported by suspenders, or buttoned to a waist.

Each lady should make it a study to avoid skirts as far as it is practicable to do so. One stiffened white underskirt, with the customary dress skirt and overdress, are sufficient for appearance and comfort.

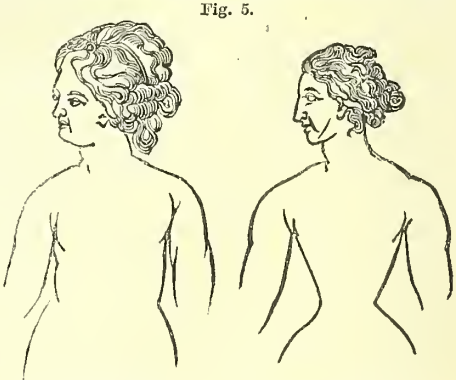
8. Corsets an unmitigated evil.— If tight, they compress the ribs and thereby force the abdominal and pelvic viscera into abnormal positions; if loose, they still injure by their stiffness, and their consequent unhappy effect upon the great muscles of the back, sides and abdomen. A corseted waist is not unlike a splintered arm in one respect. The muscles beneath the corsets and splints are alike made weak and powerless. All shrewd physicians know too well that weak sides and abdominal muscles, mean, ere long, *prolapsed bowels and uterus.* No genuinely intelligent, conscientious woman will tolerate corsets upon herself or daughters.

Fig. 4.



RIBS THAT HAVE BEEN DEFORMED BY CORSETS. UNCORSETED RIBS.

Fig. 5.



A NATURAL WAIST. A DEFORMED WAIST.

9. About garters.—Every system for suspending hose from the belt or shoulders has proved a failure. The weight of such skirts as women are compelled to wear are sufficient for an ordinary pair of shoulders, without the added nuisance of holding in place drooping stocking-legs!

With the "*Combination garments,*" garters are not called for. The hose is mostly supported by being drawn over the neatly-fitting drawers of the undergarments. The further support required may be found in a safety-pin at the outside of the limb below the knee.

Should these means prove insufficient for children, the stocking should be *seamed* (by hand, after the old fashion of our mothers), for six inches above the knees. This method will secure for the next generation handsomely formed legs and warm feet.

For adults it is better to rely upon the safety-pin below the knee, as that will prove satisfactory if the garments are properly adjusted. See Fig. 2.

Fig. 6.



A WAIST TO WHICH SKIRTS MAY BE BUTTONED.

10. How Underclothing should be suspended.—The *Combination garments* are all made from the shoulders, and thus each garment is its own suspension.

All underskirts should be buttoned to neat white suspenders, which cross high in the back and pass over the shoulder to the belt, as in Fig. 3. If suspenders are not desired, a pretty waist may be substituted. The reader is referred to Fig. 6 for a representation of the waist and skirt buttoned thereto.

The dress skirt should *always* be sewed to a well-fitted lining. Dressmakers who send from their workrooms heavy skirts sewed to belts, do not consider the comfort, convenience or health of their patrons. What is more distressing, if not humiliating, than to see a fashionable skirt, weighing four pounds, dragging by a belt to the loins of a feeble woman, who twice each week must needs present herself to a physician for the purpose of going through some mysterious manipulations in the way of replacing her disarranged organs, etc.

11. Shall a woman wear Pads, Belts, or Bustles?—If the padding consist of light wire shapes fitted by hand to the bust, and of a convex form, no harm can come from their use. Belts are bad. Their habitual use will eventually derange liver, stomach, and spleen; while they must lessen respiratory power.

Fig. 7.



AN UNBELTED WAIST. A BELTED WAIST.

All bustles except wire or hoops are to be avoided. The latter attached to a suspender is really an advantage, in that it raises the skirts from the back which, otherwise, would become overheated from the numerous folds in the outside skirts. In short, belts, bustles, and pads may be worn when they do not cripple movements, spoil form, or superinduce heat.

12. The Old System of Woman's Dress Compared with the New.—In the old or ordinary style of woman's dress, scarcely anything is more conspicuous than the lack of common sense shown in the arranging and getting together a suit or set of clothing, or than the multiplicity of

garments put on, and the *many motions* a woman must of necessity make, while going through the process of dressing. Every movement of the hand requires nervous power for its performance. When, by a flight of the imagination, one calculates the thousands and thousands of *unnecessary dressing* movements a woman must make during ten years of her life, is it any wonder that nineteen-twentieths of the women of to-day have exhausted nervous systems?

A lady, with muffled groan, narrated to me, not long since, a single morning's dressing of herself.

After adjusting nearly one pound of solid braided hair on the top of her head, which was held in place by about thirty hair pins, and adorned by a couple of bows and heavy-topped comb, she took a few long breaths while she reconnoitered the debris of last night's discarded habiliments, and speculated as to how she could quickest appropriate them.

First, she drew on her knit drawers, next clasped her corset about her, then came in order a knit shirt, chemise, stockings, garters, muslin drawers, two flannel underskirts, hoops, bustle, two more skirts, pads, corset cover, dress skirt, overskirt, basque, belt (and ornaments attached thereto), cuffs, bracelets, rings, collar, neck-tie, pin, earrings, watch and chain, various black necklaces and ornaments.

This lady was a church member, attended prayer-meetings regularly, and was "benevolent."

This dress process must be gone through with three hundred and sixty-five and a quarter times per year, to say nothing of the three hundred and sixty-five and a quarter afternoons that she must dress for, or of the every other dressing that must be performed! Where is the use of talking about opening up avenues of labor for women, while these stupendous daily dressings must be gone through with? It seems to me it were a mercy to her to close up avenues of labor, lest with all that even ordinary dress calls for, she may be in danger of working herself to death!

Let us for a moment analyze this woman's dress, which, by-the-by, is a fair sample, corresponding to which the average woman adorns herself. First, she has but two thicknesses of

covering over her leg, from the knee to the ankle; second, but three thin covers over the arm, and over the top of the chest; while about the waist, where one needs far less than about the ankle or arm, she has two drawer bands, four underskirt bands, two bands for hoop and bustle, two bands for skirt and overskirt (and these bands, as all women know, except hoop and bustle, are made of two thicknesses of fabric), to say nothing of the two thicknesses that form the corset, the knit flannel waist, the chemise, basque, and belt, in all making twenty-four layers of cloth around the waist—to say nothing of all the gathers in the various skirts! As an antidote to this picture, I ask my reader to again study the beautiful and economical arrangement of clothing in Fig. 2, which is herein presented, then judge for herself, which system she will choose—that which exhausts and enfeebles her frame, or that which shields and ennobles it?

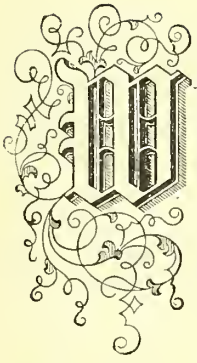
13. Dressing for the Feet.—The man who can clothe a foot handsomely is more than a mechanic; he is an artist. I have met but few, and they were geniuses.

Corns and enlarged joints embrace most of the local maladies of the feet. The first are caused by tight-fitting boots and shoes, and are cured by frequently soaking the feet in warm water, until the thickened cuticle becomes soft, and a continued use of a loose and well-fitting boot.



CHAPTER II.

HEREDITARY GENIUS.



HEN Galton wrote "Hereditary Genius" he forgot his mother, and the mother of each great mind that he used to enrich his pages. He could see the son in a sire; but the patient, prayerful, untiring mother, who raised the seedling, and watered and pruned, and finally bent the twig, passed from his remembrance.

The history of men as mothers have made them, is yet to be written. Given a child or man, with the "pauper vice of lying," it will not be difficult to find some ignoble, undeveloped human creature who has mothered it or him.

A woman will bear children of a quality corresponding to her age and moral development.

15. What a mother has can she give to her offspring—not more.—Has she age, experience, maturity? Is she strong through suffering; wise from observation; of flinty honesty, from long-trained convictions; enthusiastic through the possession of an exalted faith; has she "walked with God" for twenty years? Then her son may be a Samuel, or even more. She has the material whereof heroes are made.

Is she young, ardent, inexperienced, filled with impulse, hope, ambition, courage? Yet, her child will be born without that which time would have given the mother. He will not be born great. His mother had only youth, and could not give the nobler qualities which come only with *maturity*.

What a mother has can she give to her offspring—NOT MORE.

An example, as given by Macaulay, is James I. of England, and VI. of Scotland, "the offspring of Mary Queen of Scots, and the handsome, inconstant, base, unmanly Darnley." Mary was twenty-three, Darnley nineteen years of age. King James exhibited all the youthful follies of both parents until his court became a byword for fickleness and dishonor.

The Duke of Reichstadt, son of Napoleon I., by his second wife, Maria Louise, is an instance of the product of an undeveloped mother, of strong propensities and weak intellect, unaccompanied by moral sentiments. Not that the children of a young mother are necessarily weak morally, but that having only the impulses of a girl she is less liable to transmit the nobler qualities.

16. That which dominates in the mother becomes the LEADING characteristic of the being conceived. Vivacity, ardor, immaturity, characterize the sixteen, eighteen, and twenty year old mother, and so her children. These qualities *may* also characterize the mature woman who assumes motherhood; but, with them come discipline, wisdom, the sway of the spiritual elements, combined with a profound sense of responsibility to God for the making or marring of a human soul. From the latter we get a consecrated nobility for the new being which cannot come from sources less precious.

The biographers of gifted men, though often reticent respecting maternal transmission, do now and then disclose important proofs, showing that the older the mother is, other things being equal, the richer are her bequests through offspring.

17. It seems strange that Bible Readers and physiologists have not discovered that the influential men of the Hebrew nation sprang almost exclusively from the loins of mature or aged women.

When God makes a patriarch He summons a *woman*, not a girl! Sarah had long since arrived at the years of understanding when she fondled Isaac; Jacob and Esau were the children of adult age. And who can forget that Syrian grandmother at Pădan Aram, taking leave of her daughter Rebekah, while she

uttered that prophetic injunction, "Be thou the mother of thousands of millions, and let thy seed possess the gate of those which hate them."

Jacob was of choice as well as mature stock. We almost feel the far-off spirit of that heroic grandmother, and the near-by sweetness of the gentle father in his involuntary exclamation, "Surely the Lord is in this place, and I knew it not; this is none other but the house of God: and this is the gate of Heaven!" Who can tell what confluent ancestral streams unite to produce the seemingly accidental greatness of men that now and then bursts forth upon the world!

18. Nature's Laws are Simple: but, when known, explain with clearness the most complicated appearances.

Further on, we find Reuben. "Unstable as water" was Leah's first-born, while Judah, the "lion's whelp, from whom the sceptre shall not depart," was her fourth son. Joseph, "a fruitful bough, whose branches run over the wall," was almost a child of old age. Moses and Aaron were later born children—Moses the youngest. David was the eighth son. Solomon was the child of maturity, with a "loose screw" in his immediate origin; hence his worldly wisdom and his spiritual poverty. In his misdemeanors we see a stupendous illustration of befouled motherhood, of intellect without morality. His glory was a sham! Never was there a more perfect expression of the worthlessness of human life, unillumed by the divine element, than Solomon's meditations in Ecclesiastes! Farther down appears the beloved Timothy. Paul's words, as usual, are pregnant with suggestion, where he says, "When I call to remembrance the unfeigned faith that is in thee, which *dwelt first in thy gradmother Lois, and thy mother Eunice;* and I am persuaded in thee also."

It will be instructive just here to remember another grandmother, that we may further realize how important is the *mother line* in ancestry. Julia is not like unto Jacob's Syrian ancestress, who looms forth in the domestic drama at Padan Aram, nor yet resembles the faithful Lois of Timothy. She was "a woman of dissolute conduct, libidinous passions, and

abandoned infamy." Her most prominent child was Caligula, who wished the Roman people had but one neck, that he might at one blow destroy the whole race. Grandmother Julia's grandson (borne by the violent-tempered Agrippina) was *Nero*, in whom savage cruelty seems to have fruited! History furnishes no parallel to this human monster, who descended from the infamous Roman Julia.

19. "Look upon this Picture then upon that." —From Grandmother Lois and Julia to Timothy and Nero!

Henry IV. was the most beloved of all French rulers. He was also the beloved grandchild of Margaret of Navarre and Henry D'Albret.

Lord Bacon, probably possessing the most powerful mind that has yet appeared upon the earth, except Moses and Aristotle, exemplifies the intellectual worth, culture, and maturity of both father and mother.

Anne, the mother of Francis Bacon, was educated like a man. Her father, Sir Anthony Cook, gave her, at night, the lessons he had given the prince (to whom he was tutor, under Edward VI.) during the day. Anne Cook became "distinguished as a linguist and theologian." "She corresponded in Greek with Bishop Jewel, and translated his Apologia, from Latin, so correctly that neither he nor Archbishop Parker could suggest a single alteration. She also translated a series of sermons from the Tuscan of Bernardo Ochino." "Her parental care of her two sons, Anthony and Francis (mark Francis, the most noted, was also the *youngest*), two of the most extraordinary men of her time, or, indeed, of any time, is possibly the best test of her powers." This was deeply felt by Francis, who, in his will, says, "For my burial, I desire that it may be in St. Michael's church, near St. Alban's—there was my mother buried."

In Birch's Memoirs of the Reign of Queen Elizabeth, may be seen "the extraordinary vigilance used by Lady Anne in superintending the conduct of her sons long after they were adults." "Sir Nicholas Bacon," continues Macauley, "was no ordinary man; but the fame of the father was thrown into shade by that of his son." "Sir Nicholas Bacon," says Lloyd, "was a man

full of wit and wisdom. He had the deepest reach of any man at the council-table; the knottiest head to pierce into difficulties; the most comprehensive judgment to surmount the merits of a case; the strongest memory to recollect all the circumstances at one view; the greatest patience to debate and consider, and the clearest reason to urge anything that came in his way in the courts of Chancery. His favor was eminent with his Queen, and his alliance strong with her statesmen. He was Lord Keeper of the Great Seal in the time of Elizabeth. He was, in a word, father of his country and of Sir Francis Bacon." It would seem that with so gifted a man, great qualities would have been transmitted to offspring irrespective of the quality of the mother. Let us see what biography says:

"By Sir Nicholas Bacon's *first marriage he had six children!* Those and the mother who bore them passed into oblivion, leaving no trace except the record—'They were!' Had Sir Nicholas possessed a less 'knotty head' in his selection of a second wife, and done as most Americans do, wedded a *girl*, young enough to be his daughter, doubtless another 'They were' might have been recorded for his progeny. Fortunately he wedded Anne Cook, who was between thirty and forty years of age, and the two most extraordinary men of England were the issue of this union."

20. Milton, upon the other hand, married foolishly. Though great as a poet, he was in his domestic relations harsh and intolerant. From some constitutional or educational deficiency, Milton held low views of women. He did not respect women. As a consequence, he made three matrimonial mistakes, and was the victim of three divorces. He unluckily married uncultivated, stupid women, and his fine genius was lost to his offspring, because united to women of low temperament. His sole surviving descendant is to-day keeping a petty grocer's shop!

21. Two Historical Families in our own country, the Edwardses and Wesleys, have had *maternal* founders.

"Mrs. Edwards, the mother, who received a superior education in Boston, was tall, dignified, and commanding in her appear-

ance; affable and gentle in manner; possessed of remarkable judgment, of extensive information, of great piety and excellence of character, while she was domestic to the last degree" (as all symmetrically and artistically organized men and women are). Mrs. Edwards was regarded by her contemporaries "as surpassing her gifted husband in native vigor of understanding." Jonathan Edwards was the choicest blossom of this union of Nature's aristocrats. So powerful was his oratory, that in his sermon "On the Doom of Sinners," "the solemnity and feelings of the audience deepened at length into such insupportable agony" that the people cried aloud for mercy.

The mother of the Wesleys, Susannah Annesley, bore *nineteen* children, and yet found time "to bestow *elaborate* care upon the moral training of her three talented sons." There is a deep and well-founded reason for the Methodist church allowing women "to speak in meeting." John Wesley founded the Methodist church, and Susannah Annesley founded John Wesley!

22. Pitt, Fox, and Burke were all youngest sons. The mothers of Sir William Jones, Cuvier, and Fenelon were in the meridian of life at the birth of their distinguished children. Washington came in his mother's maturity, and "was strikingly like her in face, mien, and mental poise." Dr. Samuel Johnson's mother was over forty years at his birth. Benjamin Franklin was the eighth child, Benjamin West the tenth, and Dr. Doddridge the twentieth child of their respective mothers.

Napoleon I. came of a young and fiery Corsican, inured to scenes of camp and council.

Goethe was born of a young mother, gifted intellectually, but whose moral sense was developed late, if at all. Who can say how different his life would have been if his mother had been more a woman and less a girl. Then we should have had no Faust to corrupt our youth; and Goethe's own life would not have been befouled by loose gallantries, which cause his friends to blush while they apologize for him. Who must not remember Hannah and her child of prayer, Samuel?

23. Children of Prayer, even if not Nazarites, come to this world peculiarly freighted with spiritual power. Our own Samuel J. Mills, originator of the American Foreign Missionary movement, was given to the Lord by his mother, as truly as was that other Samuel by Hannah.

Upon the contrary, Hagar, with painful truth, represents that unfortunate class of women who blacken the souls of their offspring by indulgence in unholy passions, and demonstrates what unhappy, desolate motherhood can do in marring human creatures. Ishmael's brooding passions furnish a mournful contrast to the loveliness of Isaac's character, as the latter exclaims, "My father, behold the fire and the wood; but where is the lamb for a burnt offering?"

Nor does Hagar's influence stop with Ishmael, if the Arab Syed Ahmed can make true his rendering of various biblical prophecies—among others, Gen. xvii. 20, and Isaiah xxi. 7. Syed Ahmed, with some show of plausibility, makes Hagar the mother of Mahomet, or rather her son the father of Mahomet and his followers. Accordingly, we have fifty million Moslem Ishmaels, in addition to the thousands of Ishmaels in our own land, whose hands are against every man, etc. In view of these facts, it seems very certain that the lion and lamb won't lie down together yet awhile!

Nor will the world be righted until the mother-power is set to work less wastefully and more wisely.

Next to God, woman has most to do in improving the race!

24. Unfortunately, when Man has written of hereditary genius he has seen only men, until the common reader might believe the fathers all Jupiters, and their sons, Pallas-like, sprung from their heads; but when men reckon children without their mothers, they forget to count their host.

Some wise man has suggested that to improve offspring the prospective mother have about her beautiful pictures and statues, so that she may by some mysterious, psychological photography transfer the mental impressions to the soul of the unborn child. This plan may be very well, and doubtless is, when nothing better presents itself.

25. I can think of nothing better in the "statue" line for the coming mother to admire than a *husband* who is beloved, honored, and trusted to the heart's core. His very footfall, as she awaits in expectancy his coming, will limn his characteristics upon the unborn child: the tones of his voice, the touch of his hand, will send ecstasy through the sensitive organism of the mother, which shall tone and beautify the soul of the unborn as the sunlight stains the petal of the flower.

26. In Biographical History no one thing is more striking than that the women as mothers, who, other things being equal, have been most beautiful spiritually, most susceptible to divine influences, who, in other words, have lived most with God, have most power for ennobling offspring.

Before Samson was born, his father, Manoah, plead the parental cause by demanding of the angel, "How shall we order the child, and how shall we do unto him?" If Manoah's were the prayer of all fathers and mothers to-day, we could afford to wait for the millennium.

27. The Nicodemuses of the World may parley and doubt, but there is a spiritual illumination, a mystical affiliation with divinity, a Pentecostal day, which the Quakers have got hold of, and which "holiness" meetings are discussing, that deepens, broadens, heightens, and intensifies human life to many times its original capacity. Women, as mothers, can only demonstrate their full power by coming into this higher realm of existence. When husbands will give them companionship in this seraphic world of spiritual might, we shall see the human blossom in its perfection—*but not until then.*



CHAPTER III.

HOME EDUCATION OF CHILDREN.



EXT to good ante-natal conditions a judicious *home education* will do more to rid this earth of vice than all other things and influences combined.

One can predict, at a glance, the *moral* bias of men and women by the manner in which they take hold of the minutiæ of domestic details. Integrity in the details of life is equivalent to a certificate of character! Shiftlessness, looseness, unconscientious endeavor here, means baseness of heart and purpose.

29. One grand principle in child culture should be observed from early babyhood, namely, *never* do a thing for a child that it can do for itself. Second, oblige the child to *work*, to accomplish a given amount of labor each day of its life. Not long since I heard a philosopher remark, that "the crying curse of to-day is detestation of labor. The common desire to get a livelihood without work leads to idleness and crime."

A third principle should be to teach a child *reliableness* and *exactness*. It is needful to place the foundation of character deep down in childhood or babyhood, if it is to stand the after storms and battles that may come. I would like to see a child so soundly reared that he would expect a thunderbolt to fall about his head if he disobeyed father or mother.

30. I believe the actual moral bias of a boy or girl is determined before it is eight years old. If he will tamper with truth at that age he will never quite forget the trick in

later years. If he cannot be trusted to execute a little commission by the time he is eight years old, I would give little for his trustworthiness later in life.

The child is emphatically father to the man and mother to the woman. All the plays, all the work of the first eight years of a child's life should have a *moral* bearing. McDonald's story of the stern old Scotch grandmother, who compelled her grandson to *return the pennies given him, because he had not earned them*, should be conned o'er and o'er by the morally shiftless mothers of this generation. That such rectitude of conduct can be enforced, and the most exquisite gentleness be maintained, both by educator and educated, is demonstrated by kindergartens.

31. The Kindergarten method of instruction should precede all book training. Mothers themselves should understand kindergarten principles, and begin the education of the child the first week of its life. Who can compute the tremendous advantage that would accrue to the human creature could all its earliest powers be directed in such a manner that it need *unlearn* nothing in later life, and that it be directed in such a way that all its young enthusiasms could be utilized to the development of its body and soul! Half of life goes in striving to *unlearn* actions and their effects, that should never have been learned. Human power could be *quadrupled* by an *economic* use of every faculty God has given us.

32. Work is a great means of development.— Boys should be taught all manner of work about house and garden, even plain sewing and knitting will often keep them from mischief, as well as teach them a little handicraft that will serve them later in life. Some of the most heroic men I have ever known helped their mothers in domestic details during boyhood. Girls should be taught dish-washing, bed-making, sweeping and dusting, from their fifth year of age; while sewing and knitting should be commenced two years earlier. The honestest and brightest women I have known could hardly remember when they learned to sew. A mother cannot commence these homely duties too early for the welfare of her

little ones. One of the banes of to-day is that nine-tenths of all girls, rich and poor, under fourteen years of age, know not the use of the needle. If a thorough and exquisite use of the needle does *not* help along women's rights it certainly is a safeguard to virtue. I even believe it will aid so-called women's rights, viewed in their true light.

33. Men are drifting too much out of the sphere of domesticity, and they are taking with them their wives and daughters to the uncertain wastes of hotels and boarding-houses.

The children of the wealthy are among the most unfortunate children we have, since they are reared to no certain vocation, and with no definite purpose. A young lady should hesitate a long time before she consents to marry a man who has been reared in a boarding-house, a hotel, or in a rich family. Nine to one, in either case, he will prove a blight to her life.

34. Manners.—The study of mere books is a small item in the education of a human being.

The ancient Persians considered the attainment of two things sufficient for a hero. These two items were *to speak the truth* and shoot with the bow. With these hardy truth-speaking and bow-shooting Persians, Cyrus made a renown that has lasted from the time of the prophet Isaiah to the present.

Next to truthfulness, for a boy or girl, should be placed modesty. Genuine modesty is directly allied to nobility. Its inculcation must begin with babyhood itself; hence the best child must be reared by a mother, noble in soul and cultured in mind, and not by an ignorant nurse recently imported from the slums of Europe!

Modesty modifies every act and phase of life by its unspeakable charm, while immodesty sullies every thought and look by its stolid effrontery. One of the portentous signs of the times is the conspicuous lack of modesty which is betrayed by men, women, boys, girls, and even children, in looks, words, and acts.

The brazen freedom manifested between the sexes at the present day, to the clean-minded observer, is simply immodesty, without the semblance of a blush remaining. Few things astonish one more than the indelicate (if not actually love) letters that pass from female parishioner to pastor, woman to man, boy to girl, and *vice versa*, and all, while, mayhap, only casual relations of acquaintanceship exist between them. In the good old days of Quaker training, we believed it a *crime* to indite to a man, unless under the solemn vow of betrothal, a line that could be construed into even a tender sentiment. I think the mothers of to-day have no idea to what a criminal extent this indelicate, immodest, voluptuous, I may say sensual, style of epistolary traffic is carried on. A girl cannot write a pseudo-passionate epistle to a man without losing a flavor that the *honest woman cannot dispense with.*

35. True Politeness is so much a thing of the *soul* that I should sooner recommend the "Sermon on the Mount" for a text-book than Lord Chesterfield's Letters. It is so blended with perfect obedience, truthfulness, modesty, and a certain sensibility of temperament, that I look for it only among the children of genuine Christian people. It is, in fact, the result of a harmony of these high qualities. The time to lay its corner-stone is in earliest childhood, if not late infancy.

36. Physical Culture.— Artificial methods for body culture I have very little faith in. They are only a poor make-shift, when natural, wholesome, spontaneous child-life cannot be had. Nurses, and all their unnatural complications, are simply a subtle, and, as yet, by parents, feebly comprehended curse to the fresh-souled child.

What a child, male or female, needs is to be *let loose* out of doors, with children of its own age for companions; and for playthings, a dog, cart, boat, ball, kite, sled, mud-pies (in their season), with trees to climb, an old shed or barn to hie to in rainy weather, while over, and unobtrusively guiding and encouraging all, should be the cheerful-faced and wise-hearted father and mother, who are ready, with instant sympathy, for each childish joy and sorrow. With such facilities for a vigor-

ous life, a child will outlive consumption, scrofula, weak legs puny arms, and bad dispositions.

A few restrictions should be laid upon the child, or it will not profit to the full by these advantages:

First. Its daily modicum of work must be done before play.

Second. Its meals must never be omitted for amusement.

Third. It must not be allowed to rush from the play-spell to the table, but rest a half-hour before dinner and supper. Many a child is made a life-long dyspeptic by immethodical and hurried eating.

37. Children's Dress.—I have observed that over-dressed children are rarely robust in body or natural in manner. As a rule, cotton garments are objectionable. Wool fabrics for pants, dresses, coats, and sacks should be used for all seasons, except a few weeks in midsummer.

The legs, knees, arms, and shoulders of children of both sexes should be scrupulously covered, winter and summer, unless in the latter they are happily allowed to run barefooted for a term of ten or twelve weeks. Fortunately persons of wealth, provided they possess culture, are striving to subject their children to those conditions of life, irrespective of foolish notions of dress and appearance, which will ultimately bring them most body and soul power. The parents of Henry IV. of France placed their son for some years among the peasantry, where he shared their labors, and was fed largely upon a diet of bread and milk. He became noted for his personal beauty. No doubt his early days of out-of-door life and bread and milk had much to do with it.

I know of an intelligent Englishman who has placed his son among farmers, that he may learn how to do homely work and practice self-denial. All over this country men and women are commencing to realize that six feet altitude and 180 avoirdupois for their son is a better start among men than the bankstocks of the deplorable specimens of precocity and inefficiency that disgrace too many families of wealth.

38. Children should not only be plainly and substantially dressed, but they should be taught to

take care of themselves and their clothes. Each child should have given it a drawer in a bureau, or a small trunk, where its clothes are kept, and he should be expected to keep said drawer or trunk in perfect order. Bonnets and hats, coats and sacks, should be carefully hung up at a stated spot by the wearers of each. Boots and shoes should be kept clean and black by their individual owners. And just so far as practicable the rents and holes in wearing apparel should be mended by the makers of them. This habit in *both sexes* should be commenced in the early morning of life. I know of nothing that so induces steadiness and gentle obedience in children as an attention to these details of life. Life is made up, in the main, of such minute details that he who is derelict therein becomes a creature of inharmonies.

I know of few sights so unlovely as a child unchastened by restraint, roughened by boisterous companionship, and careless of all persons, places and things save the gratification of his selfish wants. One need not expect high breeding or lovely characters to evolve from such unpromising boy or girl childhood.

39. Religious training for Children.—I cannot close this chapter without alluding to religious training in children. Unchristian parents furnish sorry instructors for children. One must *feel* that which he would inculcate. While it may be unwise to attempt to teach doctrines to children, it is never too early to instill into their fresh souls a trust in divine power, and an *implicit faith* in God as a *personal friend;* and that all that is noble and good in us finds instant response from this celestial source. With these premises granted, the child should then be taught in the good old Quaker way, that simply doing right in every act and thought, with no struggle for fervid experience, is all that is required. How rich is the harvest of life to one thus inspired and taught!

For the encouragement of mothers, I must relate one little item concerning John Ruskin. His mother literally compelled her son to read the Bible through from Genesis to Revelation *once each year.* Late in life her son confesses that aside from

his getting a splendid knowledge of the Bible, in consequence of his mother's requirement, he acquired a punctuality and method that had been of unspeakable value to him.

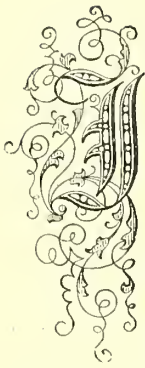
I do not comprehend the objections usually brought against indiscriminate reading of the Bible. I cannot comprehend how a clean-thoughted person can other than drink in heroism and inspiration—even if deadened to spiritual enlivenment—from the grand panorama of that biblical army of men and women, mighty in body, heart and spirit!

Then, I would read, with the children, the Bible, and believe that with their hearts and imaginations they would drink in the truth, poetry, and transcendant humanity that crowd and scintillate its pages.



CHAPTER IV.

"SEX IN EDUCATION."



IN Eden's first days there was no consciousness of sex; and the innocent, artless meandering of the two first lovers, beguiled only by the birds, the stars, and the unstudied chain that fettered the twain, is the first love story in Jewish literature.

How different now! This age and generation are bedaubed and beslimed by sex. There is sex in politics, sex in labor, sex in the pulpit, sex in church-membership, sex in schools, sex in conversation, sex in exercise, sex in dress, sex in everything from the cradle to the grave. Yea, even the marble slab tells us *she* was a *relict* of *him*, as was his snuff-box or spectacle-case.

41. In a respectable farming district in New England, the neighbors were all on the *qui vive* one September Monday morning because a new schoolhouse, and a new teacher who had recently graduated at Harvard, were the topic of conversation. The announcement was made at previous Sabbath meeting that the teacher had arrived, and the school was to begin immediately. The "tinkle" of the pretty bell caused an instant hush, and the children anxiously waited for the first words from their new teacher, who was to be called "professor." He was about twenty-eight, and of a pale, spare, little-legged, small-armed, round-shouldered, thin-lipped sort, brow large and pale, eyes small and bright, voice somewhat effeminate and affected, and the absence of jewelry and carefully-worn clothing left the impression that he had worked hard and denied himself much to acquire a thorough education.

Then he told those little birds with outstretched bills how he

had come to work for them, and wanted to learn to love them all, that he might teach them more. He drew pictures of their after-life until the boys grew big, and their breaths grew hot as they unconsciously panted for the task which should lift them to the mountain-peak of fame and usefulness. For the girls he pictured only the enjoyments of a quiet home and its nameless common duties; but fame, and honor, and recognition, and culture, and power, were not for them. The professor told them that Dr. Clackenboss had lectured to the Harvard students and told them that girls, by virtue of their sex, were unfitted to cope with boys in study; that if they did, they would fail in health; that nature made them "superior creatures," and they were not fitted to travel those paths where the lion's whelp goeth not and the eye of vulture never sees; but that girls might serve God by waiting on man, by attending to his linen, and preparing nice dinners, and taking care of the children, and, finally, making a model Christian home.

The regret one feels with the first thought of having been born a girl is only more than compensated by the grander thought of our inheritance of womanhood. *Womanhood!* The exotic of all the ages! pale, suffering, patient, wronged womanhood! When will thy thongs be cut, that thou mayest again walk and talk with thy Father, God, and not feel thy prayer stifled through its clumsier expression by thy self-constituted keeper and master?

The enlightened American womanhood of to-day does not ask to vote, or work, or trade horses. Its one prayer is for *emancipation.* Think of it, ye gods! Lucretia Mott, Mary Livermore, Lydia M. Child, Mrs. Oakes Smith, and others of their ilk, subjected to the critical castigation of a brainless tape-measurer, or that of some irresponsible, beardless scribbler in some impersonalized journal. Do you wonder that the common phase of man's regard for woman is received as a poor compensation for her *reserved rights* held within his greedy clutch?

Man knows but little of the tyranny of sex which pervades Christendom. Let him, in imagination, change places with the most favored woman, and he will no longer wonder why he never heard a man express a wish to be a woman.

42. Mabel Jones sat and listened. Mabel had great big eyes, and they always seemed full of tears, though she seldom wept. Her father, Squire Jones, used to keep an underground Railway Station, and Wendell Phillips and Lucretia Mott used to visit him, and Mabel often heard them and her parents talk of schools, and religion, and government, and the *Fugitive Slave Law*, and she had been encouraged by her wise mother to believe that one day she might help to make some things a little better than they were.

On that Monday morning Mabel had carried an armful of books to the new schoolhouse. She was fifteen, and she hoped to learn so much, and help her brother, who was not as bright as she; but now the new teacher had told her that *girls could not do much* in this world, and that they did not amount to much any way. Mabel had always thought otherwise, and she was a wise girl. She looked around at the girls and women she knew, and they verified what the professor had said. Then she thought the professor was very wise, for he was from Harvard. And he told them of the great Dr. Clackenboss, who knew all about girls, and how God had made them, and what He made them for; and surely the great Dr. Clackenboss must be right, for he *lectured at Harvard.*

When the school was dismissed big-eyed Mabel went home; and her books were heavier than they were when she carried them to school in the morning, and the birds sang to her as she walked along. Mabel could not eat any supper, for there was a "lump in her throat." When Mabel went to bed, she did not cry; but the lump was in her throat all the same.

During the night Mabel tried to sleep, but as soon as she would shut her eyes, the new teacher would come, and she heard him say so plain, "Mabel Jones, Mabel Jones, you have been very silly. Why did you bring those books to school? Did you not know, Mabel, that girls were so organized that to study hard and learn much, will ruin their health? Only half the time can you study, Mabel. You are weak; you are a girl; half the time between now and twenty you will be unfit for study. Mabel Jones, I am sorry for you; but you are *only a girl*,—and girls can't study with boys; the great Dr. Clacken-

boss said so; and it must be so. I am sorry, Mabel, very. I think the Lord must have forgotten something when you were gotten up, Mabel."

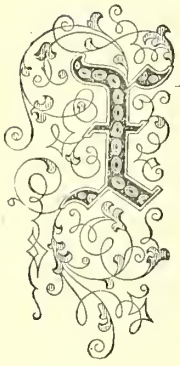
And so Mabel slept with the lump in her throat all night, and in the morning she told her mother, and her great big eyes were filled with tears. God help thee, Mabel! Thou'lt need Him again as now. I see thee in the rugged path of after years, and ever and anon go down on thy knees and ask Him to guide thee when doctors are filling thy ears with lies, and false teachers are leading thee to idleness or shame!

43. Come here, Mabel Jones, and let me talk to you. Save your tears until the time comes when you will need them more. You are a bright girl and I love you, and wish the world were full of such as you. Your new teacher is a good man, but he does not know much. He has been to school and heard professors talk; but he knows very little of the world. Take your books back to school; study them and help your brother, if he cannot keep up with you. Never listen to anybody who tells you that you cannot be a grand and useful woman. I know this Dr. Clackenboss. He is like all other *men* doctors who try to teach cultured women more about women than they themselves know. Men never seem sillier than when they try to tell a woman how she does or ought to feel.

All students should be careful to preserve their health. Do you see your new teacher? He is misshapen, old and half worn out, though only a full grown boy in years. You must do better; study physiology. Be wise in dressing, in bathing, in your exercise, in diet, in study, in everything. Then your health will not fail, nor will you fail. More than three-fourths of boys and girls lose their health while securing an education; not because they are *boys*, nor because they are *girls;* but because they have disregarded the laws of health. Place your standard high and wisely, and bravely strive to attain it; and, trust me, my dear girl, God will bless you in your work. In the darkest hours remember your commission, *make most of your every talent;* and always be comforted by the assurance that in the eyes of heaven *womanhood* is worth as much as *manhood,* and is not more liable to faint by the way.

CHAPTER V.

COURTESY BETWEEN HUSBANDS AND WIVES.



IF marriage is not a sacrament in the technical sense, it, certainly, must be made so through experience, before the parties to it reap its full meed of blessing. In a word, *marriage is either sacredness or baseness!*

"If life is one hundred," says a witty woman, "even the worst marriage counts fifty." Setting aside the delights of mere love and sympathy, springing from a rational marriage, and the consequent growth therefrom, there is yet a view of it too little considered, viz., the development of character which must come from the study of a human being to whom the wife or husband continually adapts her or himself, the constant "give and take" of opportunities and drawbacks, the incessant play of judgment (even between the most loving pair) in adaptation of each to each, the subtle play of soul upon soul, are of unspeakable value in the development of power, nobility, and, let us hope, of spiritual bloom. I believe, setting aside adultery and the worst cases of drunkenness and insanity, almost any marriage, which has been honestly contracted, can be made endurable by him or her who *wills* it.

In nearly every case of dissolved marriage, it will be found that the qualities of character which rendered marriage number one a disfigurement upon society, will also render marriage number two or three, a like misfortune. The philosophic method is, not to get rid of the marriage, but of the qualities of heart and soul that mar it!

45. Gossiping Infidelity of Husbands and Wives.—There is a disgraceful and common fashion nowa-

days for wives and husbands to narrate the drawbacks of each other to their respective friends, while, at the same time, they bemoan their personal trials and tribulations. This has always seemed to me a species of cowardly infidelity to a husband or wife which should meet with sharp reproof. It does not matter so much how a human being suffers, as that he or she hides such suffering from view. At the present day it too often happens that a woman will pour her wifely woes into the ears of another man—that, to a dignified mind, is the last CONTEMPTIBLE act a silly woman is capable of! I trust the next book on manners will proclaim upon its title-page that the climax of *indecency is to parade social troubles before the public eye, or private ear.* It is better to burst with a domestic sorrow than to tell of it! In the former case there would be hope of going white and clean to God; in the latter, your best friend will ultimately disrespect if not despise you.

46. Politeness between husband and wife.— Common sense would teach us that persons who are most vitally and intricately associated, should need to use the choicest methods for rendering such asssociation agreeable and harmonious. Since even the superficial forms of politeness seem to throw a roseate hue over the little unharmonies of life, it would strike one that a husband and wife should be scrupulously careful of the personal bearing of each other, lest either be guilty of wounding feeling by word or manner. There are so many ways in which a wife or husband may unknowingly trespass upon the domain of each other, that it seems only the most vulgarly stolid should willfully mar and darken the life of the other.

There are innumerable times and seasons when by a gentle act, or word, or even *look*, a husband may win his wife's unspeakable gratitude ; and, may there not be times when a wife may thus win a husband's ?

True success in life is so much a subjective thing, so much a thing of absolute character, that life seems a sad failure, indeed, when one has not evolved harmonies in his own home relations. Excessive politeness in public can never satisfy the

ideal loving wife or husband. Somehow we FEEL through artifices and shams, and our souls, at last, touch the reality. Only that gentle breeding that cannot be hid in society, and yet penetrates to even the bedchamber, can charm like a perfume, or a rapturous strain of music, the inequalities of life. This kind of politeness is so difficult of attainment, that one who is hampered by temper, hatred and pride, may think the task too hard, or that the prize, a good wife or husband, is not worth the toil. However, a husband or wife is only a *tithe* of the reward in this case, happily; the actual reward is a *subjugation of hateful characteristics, and the birth of the heroic and god-like qualities.*

47. When I was a girl and at school, Wendell Phillips addressed us, and dwelt upon the desirableness of meeting difficulties, and the strength of spirit that came from surmounting them. My heart burned within me at his words, and I longed to meet a difficulty. I could hardly sit still and wait until one should come; I thought I would like to do nothing but overcome difficulties the rest of my life. I did not know then what I have learned since, that the worst difficulties I could ever meet were even at that moment intrenched within my own soul! Thus it is with the young man and woman. They chafe and fret for actual life to open wide its doors, that their feet may find the broad way to success and happiness; and when the storm-king appears in their matrimonial heaven, what poltroons they are!

48. In theory they know that a trouble, courageously and conscientiously borne to the end, is an education; and yet how few but will ignominiously refuse to bear the burdens that come with marriage!

I do not believe it is possible to secure a genuinely happy marriage unless the parties to it not only respect and love each other, but that they actually possess genuine *Christian principles.* That humility and teachableness of spirit which the sincere Christian possesses is magical in the transforming and beautifying the turbulent qualities of an undisciplined hus-

band and wife. I think not half enough is said of the power of the graces in *beautifying* the hearts, dispositions, and even faces of persons. Sermons are full of the fact that attainment of Christianity is a *fee simple* for heaven; but of its exceeding loveliness in every-day life, too little is said. Christianity is worth working for if only for its BEAUTY-imparting power. I shall never forget the gracious presence of that heavenly Quaker woman, Louisa Frost, of Central New York. She was eighty-three years old at the time I saw her; and yet no youthful girl or woman ever impressed me as being so beautiful as this white-skinned, clear-eyed, gentle-voiced woman, who seemed almost as familiar with God as she was with the numerous guests who besought admittance to her chamber.

Marriage must be the makeshift that it too often is until men and women enter it with better purposes.

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CHAPTER VI.



ints upon Kitchen and Dining-room.—*There are few things* that so conspicuously determine the *quality* of the mind and heart of a housekeeper as that *tabooed* quarter of the house denominated *kitchen.* Here the mistress of a house unconsciously betrays whatever of the artistic, conscientious, practical, or capable faculties she may possess. The kitchen is a far truer index of the spirit of the house than the parlor. The plea that "servants rule" is no excuse for kitchen mismanagement. It is but a plea for the incapacity and the undisciplined heart and mind of the wife, mother and mistress. Servants *don't* rule in the houses of any save badly organized or badly trained women.

50. What the Kitchen should be.—The kitchen should be not only light and airy, but it should be *sunny* morning and evening. It should be lighted by at least *four* windows, which can be easily opened top and bottom. Dark kitchens are not only unhealthy for its occupants, but food in them must of necessity be less nicely cared for, because of the lack of light. Mustiness or mouldiness, that offense to nostrils, taste, and good health, is common in kitchens to which the sun's rays do not commonly penetrate.

A light, sunny kitchen is almost sure to be sweet, wholesome, and cheerful. The walls of a kitchen should either be painted or papered in light colors, the windows be relieved by easily-moved shades, and the floor should *not be carpeted,* but *painted and varnished twice each year.* No one who has not tried it can realize the sense of cleanness that comes from a well-painted,

well-varnished kitchen floor! By a properly adjusted flue over the stove or range, all odors can be at once conveyed to the chimney-top, and thus the adjoining rooms and hall-ways be relieved of unhealthy, unbeautiful, not to say disgusting odors.

51. Laundry work should be done in a little outside room which is always needful for various work that does not legitimately belong to the kitchen proper. In that room the tubs should be permanently set and arranged, with faucets for escape of water. Lifting of tubs has done untold mischief to the lumbar and uterine muscles of women. It is a needless and wasteful use of strength, which all women should protest against. In these days, when every prairie farmer in Nebraska or Dacotah uses all expensive machinery invented by the wits of men, and propelled by the muscles of horses, for saving his back, legs and hands, *women* should see to it that they waste not an ounce of nerve power through muscular taxation, that can be obviated by a little inexpensive machinery.

52. Kitchen Conveniences.—A kitchen should be a sort of convenient machine, that can be worked with little friction.

The cooking-stove or range should embrace the latest improvements, even if it be renewed as often as a farmer renews his hay-rake. I must repeat, lest my reader gather not the whole emphasis that my words are meant to convey, see to it that the *stove* or *range* be *labor-saving, and thoroughly convenient.* Every woman knows that a stove with a feeble draught, one that won't hold the fire, one that requires continual lifting of utensils, an oven that burns on top, or that won't bake on the bottom, doubles labor and nervous exhaustion for herself and servant.

53. Kitchen Closets.—Never tolerate a *dark* kitchen closet or unfinished corners. The shelves should be covered with light, if not white paint, and there should be abundance of drawers for linen, knives, and spoons, also an abundance of hooks for hanging whatever can be hung. Architects are behind the spirit of the times in their arrangement of houses and

house economies. Whereas everything about a kitchen and its environs should be arranged with a view to the least lifting, the fewest handstrokes and footsteps, architects contrive everything for the most wasteful outlay of strength. And so untold tons of woman's strength goes for nothing.

Just here a wise, intelligent, and mechanically ingenious husband (men without deft hands, nimble brains, and sympathizing hearts make poor husbands), can wonderfully supplement a woman of tact. It would not be too much to say that he can even save power to his wife that shall ultimately go over to his coming children, by contriving ways for saving her strength in the kitchen. Sure I am that hundreds of women, both East and West, are wasting power in their badly-arranged kitchens and dining-rooms that otherwise would have gone to the invigoration of their offspring.

54. There should be an adjunct to every kitchen in the form of a labor-saving machine. It consists of a small room, or very large pantry, about nine or ten feet long by six or eight feet wide. In it should be one large window, that opens top and bottom.

Upon one side should be a neatly-made sink, with hot and cold water, if in a city, or if in the country, pumps for hard and soft water. Under the sink should be every conceivable convenience for pots and kettles. Over the sink, high enough to be out of the way, should be a couple of shelves, five feet long, for holding tinware, etc. Upon the second side of the room, at the right hand of the sink as one faces it, should be five deep, easily-opened compartments, for coarse and fine flour, oats, corn, and rye meal. Above these chests should be a broad dresser, surmounted by a couple of excellent closets for the accommodation of ordinary victuals. The third side should be filled with wide, open shelves from the top of the room to within three feet of the floor, while the remaining three feet should be filled with nine easily-moved drawers, arranged three in a row. These can be used for table linen, etc., etc. Upon the fourth side, the superficies of which is lessened by the door to the room, should be a drop-leaf table, for bread, cake, and

pastry work. Above this table should be three narrow shelves, for boxes, nicely labeled with name of contents, such as (for those who use them) coffee, tea, cocoa, spices of all kinds, and firkins for several grades of sugar. The ceiling, walls, shelves, and floor should be painted and varnished.

I need scarcely add that the most scrupulous neatness should pertain to everything about persons and things belonging to the kitchen.

55. Servants—the fewer of them the better. Sons and daughters actually *need* the discipline of the work that servants are often hired to do.

A servant girl should be treated as a Christian woman would treat a Christian woman. It has often been a matter of astonishment to me that woman, so choice of her own daughter, should so badly lodge the daughter of some other woman, as she too often does her servant girl.

I consider it the peculiar duty of a housekeeper to *see* personally that the servant girl, who is companion to her children, shall keep her person, wardrobe, and sleeping apartment, at least, neat and clean, and that she shall appear morning and evening at Bible-reading and prayers, if such are had in the household. A servant who is too wicked to consent to this is too wicked to live among children.

56. The Dining-room.—A great man has said, "the dinner-party is the highest expression of civilization."

To prepare food in a scientific and exquisite manner, and to partake of it under satisfactory circumstances, is a matter that requires all the judgment, common sense, and artistic ability one human being is likely to possess.

A dining-room, if possible, should be an East room. It should be numerously windowed, well ventilated, and clean.

For adornment, I should prefer pictures of mountains and sea views to the stereotyped fruit and game pieces that one has long since wearied of.

The temperature should never suggest chilliness. An air of inhospitality is imparted when one must muffle in breakfast shawls or overcoats, or submit to a miniature ague fit.

57. Perfect method about all eating processes should be had. Meals should come with punctuality.

Leisure at table is agreeable as wholesome, while clouded brows, stern lips, and uncordial tones are as hateful as underbred. What earthly tableau is more warming to every social instinct than a cozy breakfast in a sunny room, with fire upon the hearth, and a table surrounded by host, hostess, children, and guests, full of cheer, humor, and appetite! Neglect no formality because you are alone. Be as much to each other as you are to strangers. Your wife will not less appreciate your wit or your smile because she is the only recipient. Your husband will not less appreciate full courses, and those distinctly separated by well-swept table linen, than he would if others shared the honor with him.

58. Always preside at your own table.—Never yield to another, unless you would take a second place in the household. If means are limited, teach your sons and daughters to wait upon the table in turns. It will allow greater freedom for conversation, and will yield a wholesome discipline to the one serving, which will not be lost in after years.

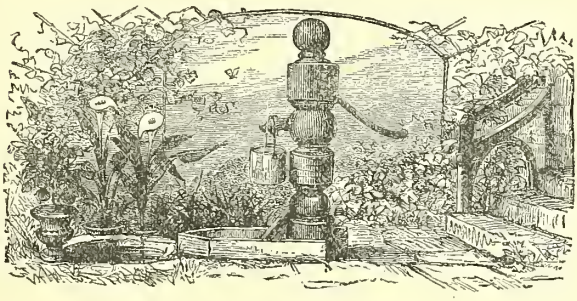
59. Do not burden your table or your strength by furnishing a great variety at one meal. Few dishes, well cooked and served, are most grateful, from all points of view. Do not have certain oft-repeated dishes upon certain set days. The eye, mind, and stomach alike are pleased with novelty. An exquisite muffin at breakfast, when the taste has revolted at the stereotyped "bread and butter" regimen, is an item to be duly thankful for. Let everything about the room and table suggest freshness.

Bread should be evenly and thinly cut, and laid upon the plate as though it had been handled by tender and considerate fingers. Butter should be hard, and carefully laid in the middle of the plate; the small milk-pitcher perfectly clean, and of exquisite form, and sugar-bowl to match. An artistic housekeeper will always see that cups and saucers are small, of beautiful form and texture, and that teaspoons are of *solid*

silver. Beverages served in faultless china and silver acquire an added delicacy of flavor. One cup thus served will satisfy body and soul as a dozen cups will not if served in ware thick enough for a wash-bowl, accompanied by a tarnished spoon.

60. Without method all life is a shiftless worry. — Everything should be planned ahead. Lincoln's advice to not cross a bridge till you come to it, will not prove sound in the household. All domestic bridges have to be crossed by the artistic housekeeper, in imagination, before the family get to them. At night have all in readiness for to-morrow's breakfast, if not to-morrow's dinner.

In the good time coming, when the domestic is to form the highest expression of life, as it surely must do if human beings are to reach their best development, husbands will supplement wives far more efficiently and cordially than they do now. Then, when "the earth is the Lord's and the fullness thereof," domestic machinery will move with a "Te Deum," and not, as now, with a sigh! Then will come harmony and contentment.



CHAPTER VII.

HINTS upon Bathing.—No bath should be taken when the body is fatigued. No bath should be taken immediately after or before a meal. If practicable, the bath should be taken when the body is at its maximum of vigor.

For ordinary life, the most convenient time for a bath is upon rising or retiring. A bath upon going to bed is conducive to sleep. Simply washing the skin with clear water is not sufficient for cleanliness. Soap should be freely used. Even with soap and water, the skin often remains unclean, as is proved by the rolls of debris that can be rubbed from it after a vapor bath.

The bath should be taken in a well-heated room, and should ever be followed by a sensation of *comfort*, otherwise more harm than good has been done.

If the person be delicate to atmospheric impressions, take the bath very quickly, and do not wet the whole body at once. For a general bath the water may be of temperature that is agreeable to the bather.

62. Foot Baths are invaluable, and may be taken several times per week, with advantage by all persons. Well persons may continue them from fifteen to thirty minutes in water as cool as can be borne. Rub dry with towel and hand, and pare the nails carefully. This practice keeps the feet nice, and rids them of corns.

63. Hip, or Sitz-Bath.—The sitz-bath may be taken in a common-sized wash-tub, or sitz-bath tub, with so much water as nearly to fill the tub when the person sits down. The person should remove all his clothing, and be well wrapped

over the shoulders with a comfortable. Many times it is desirable to take a warm foot-bath while a sitz-bath is taken. In this case, the feet should be dipped into the cool water when taken out of the warm bath. A cool, wet cloth should be worn on the head. This bath is continued from five to ninety minutes, to meet conditions; though the more usual time is from fifteen to thirty minutes.

The sitz-bath is invaluable in a host of ailments—uterine, biliary, etc., etc.

The average temperage is 90° cooled to 85° just before leaving the tub.

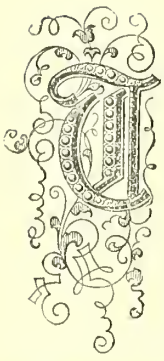
64. In acute ailments it must be remembered that the higher the fever the higher should be the temperature of the water for bathing.

65. Vapor or Turkish Bath.—This is the prince of remedial baths, specially adapted to rheumatism, colds, fevers, inflammations, "biliousness," and skin diseases. It consists of enveloping the body in a temperature warmer than the blood. The Turkish or Russian bath and the old Thompsonian sweat are equivalents. Another and simpler means: Seat the undressed patient on a wood-bottom chair, under which burn alcohol in a lamp with three wicks, each the size of your thumb, and having a cap for extinguishing one or more burners, as the patient requires. He in the meantime is draped from the neck downwards with blankets and comfortables. When the patient has sweat thoroughly, he should be washed with cool salted water, and be careful that he does not take cold afterwards.



CHAPTER VIII.

§ 66. COOKERY.



HERE are so many works upon cookery that it were not needful, even if I had an inclination, to furnish copious details upon cookery. Believing that the most of my readers are already versed in common routine cookery, I shall not waste words in reiterating that which can be learned from manuals close at hand.

My main purpose in touching upon the trite question of cookery is to furnish a bird's-eye view of the whole ground, in all its complexity and *puzzlement*, while I dot here and there the true principles that must guide the housekeeper in preparing food for her family. All work that one can systematize and grasp at once in a large way seems half accomplished. I cannot spend time to explain the preparation of many dishes, nor do I expect the novice to take the few formulæ that I am to give and produce perfect results at the first trial. Practice and good judgment alone will produce the wholesome cook. An educated woman can always with the same practice make a better cook than the uneducated. "Brains" tell as conspicuously in the kitchen as in the parlor.

The literary man, to accomplish the most, is compelled to use all the intellectual "go carts" that he can lay tongue, hand or pen to. The accomplished kitchen queen must do something similar. She must not waste strength in crude efforts or unnecessary movements. The strength that was used by our grandmothers in beating eggs with an iron spoon might have been crystallized in the form of better nervous systems for their grandchildren, had our grandfathers bought egg-beaters for said grandmothers! So, get all the help that is furnished by apple-peelers and corers, potato-peelers and slicers, skeleton egg-boilers, clothes-wringers, sprinklers, carpet-sweepers, and the

rest of the labor-saving contrivances. Don't lift a foot or finger that can be obviated by a machine. At first this may seem selfish, but in a term of decades it will be proved to be rarest wisdom. Sentimental self-immolation and sentimental self-sacrifice are only suicide. No computation can produce the sum of the subtle, far-reaching influences of a gifted, disciplined woman in domestic matters.

FRUIT.

Fruit. Our native fruits, when ripe and sound, are nutritious, and very wholesome food; but they should be used as food exclusively, and eaten at the table as part of the meal.

Apples. Wash and polish with a clean towel, and pile in a china fruit-basket, with an eye to agreeable variety of color, and place in a conspicuous part of the table.

Peaches and Pears. Pick out the finest, handling as little as may be, and pile upon a salver or flat dish. A pretty dish of fruit is an open silver basket, wide at the top, heaped with rich red peaches and yellow Bartlett pears. Send around powdered sugar with the fruit, as many like to dip peaches and pears in it after paring and quartering them. It is almost an insult to a luscious peach to sugar it.

Baked Apples. Put the apples into shallow pans, pour in a very little water, and bake in a slow oven. Sweet apples should be baked slowly and until thoroughly done. They are easily digested and fattening. Should be eaten without sugar and with cream; for children, with bread and milk.

Another. Pare rich, sour apples and extract the cores; set them in a shallow pan, and fill the holes from which the cores were taken with sugar, and bake slowly till soft.

Apple-Sauce. Slice or quarter tart apples, and stew and sweeten without stirring, so that the sauce may not have the appearance of mush, but may be inviting to the eye. Display it upon the table in a handsome glass dish. Apples may be served in various other forms that will suggest themselves to the ingenious mind. They are our best fruit, and should be used lavishly by children and all who are adopting a remedial course of living.

All fruits should be cooked in a porcelain-lined kettle.

CRANBERRY SAUCE.

Pick over the cranberries carefully, add a tablespoonful or so of water, sweeten to taste; simmer slowly until the berry

eraeks open and beeomes thoroughly saturated with the sugar. When properly done the berries are little broken and have a deep rieh eolor. Serve with fowl and all other meats in place of pickles. Cranberries are an antiseptic, and are far too little used.

Dried fruits should be cooked with exquisite care.

BREAD.

Flour should be fresh. Buy little at a time, lest it become musty. It should be perfeetly proteeted from dust and all possible suggestion of untidiness. The flour should always be freshly sifted for bread and all other eookery. The bread bowl should be *clean;* and the bread should be kneaded upon it, and not upon a suspicious-looking table. It is a nice thing to make a bateh of excellent bread. Very niee judgment is required to decide the auspieious moment when the sponge is at its best stage for moulding, and the degree of aeidity that requires the soda correetive, or rather the exaet management which would avoid such corrective.

Brown Bread of some kind should appear upon the table at each meal. It can be made so delieious that white bread will seem insipid beside it. If brown bread becomes a drug in the family, one may be sure that the cook has failed to make a good artiele.

Brown Bread. To three pints of water put a handful of hops, and boil them half an hour; put into your yeast pot or jar six tablespoonfuls of flour and one teaspoonful of salt; set your jar near the kettle, and dip the hop tea into the jar through a sieve or colander. When you have strained enough to wet all the flour, stir it well, and then strain upon it the rest of the hop water. The mixture should be about the consistency of batter for griddle-cakes. When it is *cool*, not *cold*, stir in a gill of good yeast; set it in a warm place; do not cover it close. When fermented, put it in a cool place, and cover close. This is the yeast from which we set our white bread at evening. The next morning we take a good handful of the dough, put it in a large yellow bowl, and add a teaspoonful of salt, a half cup of molasses, a pint of lukewarm water, and enough Graham flour, making a dough softer than for white bread; set it to rise and bake. We do not *knead* this bread. This makes two loaves. Brown bread is not improved by sugar.

Mrs. N.'s Brown Bread. Three cups freshly ground Indian meal,

two cups unbolted rye meal, half a cup sour milk, three cups sweet milk, two-thirds cup molasses, one teaspoonful salt, two of soda. Steam in a covered vessel six hours; water is not to cease boiling during the time. This bread may be eaten warm. After it is a day old, it may be sliced, laid in pans and heated, to be eaten with butter or milk. It is delicious. (The lady who furnished the above recipe is the mother of six children, nearly fifty years of age, has her own teeth, and has not an observable gray hair, though it is like a raven's wing in hue. She is a Yankee woman, and has eaten rye and Indian bread from birth.)

ANOTHER.

Brown Bread. The sweetest bread ever made. Take three pints of coarse yellow corn meal, scald it with three pints and a half of boiling water, add two pints of coarse rye meal after the corn has cooled. Knead thoroughly with the hands. Take it out into a stoneware crock, or pot, which is a little larger at the top. The quantity here given will take a vessel which holds five or six quarts. Place it immediately in the oven after smoothing over the top with a spoon frequently dipped in cold water. Cover with a stone or iron plate, and have but little heat in the oven. It should take three hours to begin to bake, then bake slowly four hours. Leave the loaf in until the oven cools off, if it is several hours longer. It should be dark-colored, light, and firm, with a good soft crust. A round-bottomed iron kettle will do to bake in. Try it.

Brown flour, or wheat meal, should be made from the best winter wheat.

If the following recipes prove a failure, it will be because the wheat is poor or the oven be not hot enough when the bread is placed in it.

No. 1. Gems. Into cold water stir Graham flour sufficient to make a batter a trifle thicker than that used for ordinary griddle-cakes. Bake from one-half to three quarters of an hour in a *hot* oven in small tin patty-pans two inches square and three-fourths of an inch deep.

No. 2. Stir Graham flour into soft cold water, making a batter a trifle thicker than for griddle-cakes. The exact proportions cannot be given, as flour will swell more at some times than at others. Drop from a spoon into the cups of the bread pans, which are already heated, and bake in a hot oven. Take them from the pan as soon as they are done and arrange them on plates, taking care that no weight rests upon them to make them heavy.

No. 3 is same as No. 2, save using milk instead of water, and the addition of one or two eggs beaten to a froth. The batter for No. 3 should be made thinner than No. 2.

Dr. Jenkins' Graham Crackers. Procure the whitest and cleanest wheat (Canada wheat is best), have the crackers made by a baker. Mix with nothing but pure, soft water, and thoroughly reduce the mass in a

baker's break, as for making other crackers. Have them rolled very thin, no more than half as thick as soda crackers, cut in the form and size of soda crackers, and bake quickly until a pale yellow. These will keep six months if placed in a dry, cool, sweet store-room. They are fresher and more tender to place them in a hot oven a few moments before bringing them to the table. The use of Graham crackers, made as above, will whiten the teeth.

Nonpareil Corn Bread. Two heaping cups of Indian meal; one cup of flour; three eggs; two-and-a-half cups milk; one tablespoonful butter; two tablespoonfuls white sugar; one teaspoonful soda; two teaspoonfuls cream-tartar; one teaspoonful salt. Beat the eggs very thoroughly—whites and yolks separately—melt the butter, sift the cream-tartar and soda into the meal and flour while yet dry, and stir this in at the last. Then beat the whole *furiously*. Bake quickly and steadily in a buttered mould. Less than half an hour will usually suffice. In cutting corn bread *hold the knife perpendicularly* and cut toward you.

Another. One pint sour milk; one egg; one teaspoonful soda; one teaspoonful salt; four teaspoonfuls white sugar. Bake instantly, and eat warm.

It is a positive delight to be able to make elegant biscuit, as well as an accomplishment that one cannot afford to be without.

Risen Biscuit. One quart milk; three-fourths cup butter; three-fourths cup yeast; two tablespoonfuls white sugar; one teaspoonful salt; flour to make a soft dough. Mix over night, warming the milk slightly and melting the lard or butter. In the morning, roll out into a sheet three-quarters of an inch in thickness; cut into round cakes, set these closely together in a pan, let them rise for twenty minutes, and bake twenty minutes. These delightful biscuits are even better if the above ingredients be set with half as much flour, in the form of a thin sponge, and the rest of the flour be worked in five hours later. Let this rise five hours more, and proceed as already directed. This is the best plan if the biscuit are intended for tea.

Mrs. E.'s Soda Biscuit. One quart flour; two heaping tablespoonfuls of butter; two cups sweet—if you can get it—*new* milk; one teaspoonful of soda; two teaspoonfuls cream-tartar; one saltspoonful of salt. Rub the soda and cream-tartar into the flour, and sift all together before they are wet; then put in the salt; next the butter, rubbed into the prepared flour quickly and lightly; lastly, pour in the milk. Work out the dough rapidly, kneading with as few strokes as possible, since handling injures the biscuit. If properly prepared the dough will have a rough surface, and the biscuit be flaky. The dough should also be

very soft. If the flour stiffen it too much, add more milk. Roll out lightly, cut into cakes at least half an inch thick, and bake in a quick oven. The biscuit thus made are marvels of lightness and sweetness.

Graham Biscuit. Three cups Graham flour , one cup white ; three cups milk ; two tablespoonfuls butter ; one heaping tablespoouful white sugar ; one saltspoonful of salt ; one teaspoonful soda ; two teaspoonfuls cream-tartar. Mix and bake as you do the white soda-biscuit (Mrs. E——'s). They are good cold as well as hot.

Graham Muffins. Three cups Graham flour ; one cup white flour ; one quart of milk ; three-fourths cup yeast; one tablespoonful lard or butter ; one teaspoouful salt ; two tablespoonfuls sugar. Set to rise over night, and bake in muffin-riugs twenty miuutes in a quick oven. Eat hot.

No. 1. Graham Mush. Stir slowly into fast boiling water, sprinkle from the hand sufficient Graham flour to make a thin pudding. Let it boil five or ten miuutes, and it is done. If set away from the fire a few minutes before taking up, it will cleave readily from the kettle, leaving it more easily to be washed. Very much depends on the manner of making ; as from the same materials a most delicate dish may be made, or one uot fit to eat. Add salt to suit the taste.

No. 2. Graham Mush. Mix part of the flour for the pudding into a smooth, thiu batter with cold water, which pour into boiling water, taking care that so small a quautity is poured in as shall not stop the boiling; a part may be put in first, aud when it boils up again put in the remainder. Continue this process until the mush is of sufficieut thickness. Salt to taste.

Oatmeal Mush. Made the same as No. 2 Graham mush. After it has been boiled and stirred fifteen miuutes, cover and set it where it will slowly simmer for *one hour*. Serve hot. This is au excellent article for infants and young children—much better than the farina, which is so extensively employed.

Indian meal Mush. White and yellow corn meal are made into the well-known mush called hasty pudding. Either kind is equally agreeable to most persous. It should be stirred very gradually into boiling water, so as to prevent lumping ; it should be cooked from one to two hours. Salt to suit taste. Very few people outside of New England appreciate the fact that corn meal requires *long cooking*.

Cracked Wheat. A very good food for well persons who like it, but not so easily digested by weak stomachs. Take clean, plump winter wheat, or if this is not to be had, the best that can be obtained. In five quarts of boiling water stir one quart of the graiu and boil moderately for four or five hours ; stir occasionally to prevent burning. It is better to cook in a double boiler, so as to run no risk of burniug it.

Oatmeal Porridge. Take two or three handfuls of meal, mixed, coarse and fine, in proportion of one-third latter to two of the former. Mix in a basin of cold water, and pour into a pan containing about a quart of boiling water, adding a small portion of salt. Set on the fire, and keep stirring, adding from time to time small doses of meal until it boils, and has acquired a proper consistency, which may be known by its glutinous state, as it drops from the spoon. Let it simmer ten minutes, then pour into common dinner plates. Spoon out portions and float in new milk, adding sugar to taste. Delicious to *think* or *sleep* on.

Buckwheat Cakes. One quart of buckwheat flour and half a pint of Graham meal. Mix with lukewarm water into a batter, stir in a teacupful of good yeast sponge, or a half cent's worth of baker's yeast; mix in an earthen or stone vessel, and set over night in a warm place to rise. If the temperature and yeast have been just right, the batter will be light and sweet, and not need soda. It should be considered a mistake when the ferment needs neutralizing, and care taken to set cooler or correct tho yeast. Buckwheat cakes in winter are not objectionable, occasionally. Use beef drippings for the griddle.

Buckwheat Cakes. One quart buckwheat flour; four tablespoonfuls yeast; one teaspoonful salt; one handful Indian meal; two tablespoonfuls molasses—*not* syrup; warm water enough to make a thin batter. Beat very well, and set to rise in a warm place. If the batter is in tho least sour in the morning, stir in a very little soda, dissolved in hot water. Mix in an earthen crock, and leave somo in the bottom each morning—a cupful or so—to serve as sponge for the next night, instead of getting fresh yeast. In cold weather this plan can be successfully pursued for a week or ten days without setting a new supply. Of course you add the usual quantity of flour, etc., every night, and beat up well. Do not make your cakes too small. Buckwheats should be of generous size. Some put two-thirds buckwheat, and one-third oatmeal, omitting the Indian.

PIES.

Use pies rarely. Let the crust be made of the best butter, or of cream slightly sour.

The easiest crust to make, and an excellent one, is composed of flour wet in cream, in such proportions as one chooses or can afford—the more cream the richer. Sour cream needs a little soda. When once accustomed to these simple shortenings, the grosser preparations of crust with lard are, to say the least, quite distasteful.

Among the common pies are apple, berry, custard and pump-

kin. The apples should be of the best quality, and very tart for the best results. The berries fresh and perfect. Housekeepers make a mistake in using poor articles for cooking. A little that is *good* is better than *much that is poor*.

Martha's Pumpkin Pie. Select a pumpkin which has a deep, rich color, and firm, close texture. Cut in small pieces, add a few spoonfuls of water, cover close and stew until it is dry and very brown—*almost* scorched. Near the last, frequently stir to prevent burning to bottom of kettle. Pass it through a coarse sieve while it is yet hot.

Allow two eggs to a moderate-sized pie; thin with new milk; add white sugar, salt, and spice to taste—the less of the latter the better.

Pies are usually made abominable by over-sweetening, and by spice and lard.

Custard Pies. Allow four eggs to a pie, beaten to a froth, new milk, white sugar, a pinch of salt, no spice, a cream crust, and immediate baking. All pies, save pumpkin and mince, should be eaten as soon as they are cool.

PUDDINGS,

with their brandy, wine and butter sauces, are favorable to doctors' bills, if not intemperance. They should always be taken with conscientious discrimination.

Baked Indian Pudding. Eight tablespoonfuls of Indian meal, stirred into three pints of scalding milk. Be careful to scald the meal without letting it boil. Add one pint cold milk, one small teacup of molasses, a little salt. Bake slowly four or six hours. If cooked just right, a jelly-like whey will be found in it, and the pudding will have a rich golden brown tint. Stoned raisins may be added to this pudding if agreeable.

Mrs. Witt's Pudding. Line a quart tin dish, two and a half inches deep, with a crust made of slightly sour cream, a pinch of soda and Graham flour, then fill with elegant canned plums, cover with a crust, bake about an hour, or until it is done, and serve with thick cream and powdered sugar.

One can eat Mrs. Witt's pudding with a clear conscience, which is a comfort not often experienced in the pudding department.

CAKE

is so objectionable that I append but one recipe for it, and that is so difficult to make, that I trust few of my readers will find time to experiment with it. However, sponge-cake is the least objectionable of cake.

Mrs. M.'s Sponge Cake. Twelve eggs, the weight of the eggs in sugar, half their weight in flour, one lemon, juice and rind.

Beat yolks and whites *very* light, the sugar into the former when they are smooth and stiff; next, the juice and grated peel of the lemon, then the flour; lastly, the beaten whites, *very* lightly.

The lady who furnished this recipe was celebrated among her acquaint ances for her beautiful and delicious sponge-cake.

SOUPS.

The chief fault with soups as they usually appear upon the table is their *poorness*, their lack of genuine flavor, their lack of body. They usually *appear* to be highly seasoned muddy-looking water, with a bit of vegetable or sprigs of some green herb sailing around in them. Nor does the experiment of tasting the liquid always disprove the appearance.

Soups require many hours for preparation. Meat is the basis of most soups, and their excellence depends largely upon the presence of the juices of the meat. The juices of meat cannot be extracted, except after much soaking and long exposure to heat; hence the necessity of time in making soups.

Beef Soup. The stock (or base of the soup) must be prepared the day before it is needed. The beef, bones, marrow and all, must be placed in cold water in a close vessel, and heated gradually. Do not boil at all, only simmer it for six or eight hours. The meat will be worthless, since its juices are all abstracted, so should not be used for mince pies or hash. Remove all scraps of bone, etc., and add such vegetables as are preferred—not too many of them however. Boil them until done, and strain through a colander and season to taste—a little salt is sufficient. Pepper and the like only add so much harm to an otherwise valuable compound.

Tomato Soup is simple beef soup, flavored by tomatoes.

Bean Soup. Let the beans soak over night. Early in the morning drain them, and add fresh water in abundance. Place them in a closely covered kettle and simmer eight hours. Pass the whole through a fine colander, salt, scald once more, and just before removing the soup from the kettle, add some new milk, fresh cream, or, in the absence of either, a bit of butter. This soup is improved by warming over from day to day. It is good for men in every employment, for weak women and delicate children. It is the queen of soups.

FISH.

Fish should be broiled or baked, if one would secure its most

delicious flavor. The halibut (save the head) is an exception to this rule. Fish should be fresh rather than salt.

MEAT.

Tough meat is a reflection upon the skill of a housekeeper. Beef that is too tough to broil or roast should be stewed carefully, when, by seasoning and nice gravy, it furnishes a healthful and delicious dish. The commoner varieties of beef may be thus made available.

Steaks should be cut an inch thick and *broiled, not fried.*

Pressed Beef. Take six or eight pounds of fat beef, slightly corned, boil slowly, but thoroughly, until the meat drops from the bones. Remove to a deep yellow dish of sufficient size, and press it, draining off the water from time to time. Let the pressure remain until morning, and you have a delicious mass of tender beef in good shape for slicing.

Gravies. The objection to gravies is mostly without foundation. Gravies should be made of the juices of meats, nicely thickened with flour. Exquisite gravies require a skill for their production that the common cook rarely possesses. The old-fashioned turkey gravy, made from perfectly cooked "giblets" and juice of the turkey, is a luxury that modern housewifery rarely exhibits.

Poached Eggs. The best way is to drop them into a shallow pan of hot water, taking care not to break the yolk in dropping from the shell. As soon as the white is cooked enough to hold together, take them up, laying them side by side on a platter.

Boiled Eggs. Put them in the shell in boiling water, allowing them to remain three minutes if they are preferred rare done, and five minutes to cook the yolk.

Another Way. Put them into boiling water and let them remain, without boiling, seven minutes; or they may be put into cold water over the fire, and when it first boils they are done. The whole egg is thus cooked more evenly through than when allowed to boil.

Fried Eggs. Drop an egg from the shell into each of the separate cups of the bread pans, previously heated and rubbed smooth with a small quantity of fresh butter. Let them remain over heat until the white is cooked, and then, without turning, remove them with a broad-bladed knife to a platter to serve. Salt each egg.

Eggs thus fried are far more delicate than when fried in the ordinary way. Do not allow the whites to cook too much.

VEGETABLES.

The chief point to be kept in view in cooking vegetables is

to cook them *thoroughly.* Potatoes, corn, beans and peas rarely get the precise amount of cooking that good digestion calls for. A potato that is soggy, solid, or not perfectly soft, should be rejected as unfit to eat.

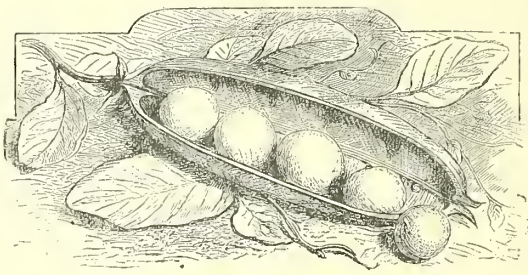
Potatoes fried to a crisp in hog's lard are an abomination that should never pass between human lips.

Most vegetables are inferior food that one is better off without. Potatoes are among the best of this class of edibles. Beans are the exception to this rule.

Lima Beans. They are prepared by abundant cooking, salt, cream, or butter, and are a valuable substitute for much of the vegetable trash that finds its way to our tables.

Mrs. N.'s Baked Beans. Parboil one quart of dry, best quality of beans (the dark-colored beans are the richest) until the skins crack when taken from the water with a spoon, and slightly blown by the mouth. Rinse in a couple of waters.

To them add one pound of very fat best cut of beef, and sufficient salt (beans should be salted during the cooking process, and not at table, otherwise they taste "flat"). Bake in a tightly-covered stone pot twelve hours. They may be put in the oven early Saturday morning and baked all day, left in over night, and baked until breakfast is ready Sunday morning. See that they have plenty of water. Bake in a moderate oven If properly done, they will have a golden-brown tint, even if they were milk-white when put to baking. I never saw any but a Yankee woman who could cook beans that *tasted* right or digested well. The skill needed to bake beans is like the idiom of a language, it must be bred in the girl, or its finer shades of meaning cannot be appreciated.



G.E.W. ALEXANDER
BINDER
NEW-YORK

II
Everett
1874

